### **ATO-A Information Technology**

**Technical Services Group** 

# Airport Navigation Aid Database Application 2.0 (AIRNAV 2.0)

# NAVAID and Components Use Cases and Business Rules

#### **Revision History**

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#### 1 Introduction

This document fully describes the functionality of Maintain NAVAID and Maintain NAVAID Component modules within the AIRNAV 2.0 system. These requirements are captured in the AVN-iSM Use Case format. It details, from a user's perspective, the needs the system must address to capture information related to maintaining the NAVAID and components information in AIRNAV 2.0 system.

#### 1.1 Abbreviations and Acronyms

Refer the document AIRNAV - Glossary for abbreviations, acronyms and other general terminology used in the AIRNAV documentation.

NOTE: The information on NAVAID and their constituent components is described in AIRNAV - Glossary.

#### 2 Use Cases

The Maintain NAVAID and Component module will include following use cases:

- 1. Search NAVAID
- 2. Add NAVAID
  - a. ARSR
  - b. ASR
  - c. DF
  - d. DME
  - e. FAN
  - f. ILS
  - g. LOC
  - h. MLS
  - i. MSBLS
  - j. NDB
  - k. PAR
  - I. SDF
  - m. SECRA
  - n. TACAN
  - o. TLS
  - p. VDME
  - q. VOR
  - r. VORTAC
  - s. VOT
- 3. Edit NAVAID
  - a. ARSR
  - b. ASR
  - c. DF
  - d. DME
  - e. FAN
  - f. ILS
  - g. LOC
  - h. MLS
  - i. MSBLS
  - j. NDB
  - k. PAR
  - I. SDF
  - m. SECRA
  - n. TACAN
  - o. TLS
  - p. VDME
  - q. VOR
  - r. VORTAC
  - s. VOT
- 4. View NAVAID
- 5. Delete NAVAID
- 6. Activate NAVAID
- 7. Create NAVAID Version8. Change Active NAVAID to History
- 9. Search NAVAID Component
- 10. Add NAVAID Component
  - a. ARSR
  - b. ASR

- c. AZ
- d. DF
- e. DME
- f. ELEV
- g. FAN
- h. GS
- i. LOC
- i. MB
- k. NDB
- I. PAR
- m. SDF
- n. SECRA
- o. TACAN
- p. VOR
- q. VOT
- 11. Edit NAVAID Component
  - a. ARSR
  - b. ASR
  - c. AZ
  - d. DF
  - e. DME
  - f. ELEV
  - g. FAN
  - h. GS
  - i. LOC
  - j. MB
  - k. NDB
  - l. PAR
  - m. SDF
  - n. SECRA
  - o. TACAN
  - p. VOR
  - q. VOT
- 12. View NAVAID Component
- 13. Delete NAVAID Component
- 14. Activate NAVAID Component
- 15. Create NAVAID Component Version
- 16. Change Active NAVAID Component to History

The details of each of the above mentioned use cases are described in this document.

A new NAVAID system record cannot be created in AIRNAV until its required component records have been created in AIRNAV.

#### 2.1 Use Case Specification: Search NAVAID

#### **Brief Description**

This use case describes the process of searching for NAVAID record(s) in AIRNAV system.

#### 2.1.1 Actors

Following are the actors for this use case:

1. Data Specialist

#### 2.1.2 Pre – conditions

- User must be logged in the system as one of the actors mentioned in section 2.1.2 above.
- 2. User must have the access privileges to search NAVAID information.

#### 2.1.3 Basic Flow of Events

- 1. User invokes the 'Search NAVAID' functionality in the system.
- System prompts the user to provide the search criteria for searching NAVAID, including but not limited to:
  - a. NAVAID Type Listing.
  - b. Identifier
  - c. Broadcast Identifier
  - d. Status Listing.
  - e. Airport Listing.
  - f. Runway Listing.
  - g. Location
  - h. State Listing.
  - i. Country Listing.
  - j. Owner Listing.
  - k. Mobile Temporary System
- 3. User enters a value for any combination of search criterion at the same time and selects to retrieve the records.
- 4. System displays a complete listing of NAVAID records, which satisfy the user entered search criteria, sorted by their type, identifier within type and status (order Active, Pending, Working) within identifier within type in a tabular format. The information displayed for each NAVAID will be:
  - a. Type
  - b. Airport
  - c. Runway
  - d. Broadcast Identifier
  - e. Identifier
  - f. Location
  - g. State
  - h. Country
  - i. Status
  - j. Mobile Temporary System
- 5. If no user records satisfy the user entered search criteria, system displays an appropriate message to the user.

#### 2.1.4 Alternate Flows

There are no alternate flows in this use case.

#### 2.1.5 Sub - flows

There are no sub-flows for this use case.

#### 2.1.6 Key Scenarios

There are no key scenarios for this use case.

#### 2.1.7 Post – conditions

There are no post conditions for this use case.

#### 2.1.8 Extension Points

There are no extension points for this use case.

#### 2.1.9 Special Requirements

 Refer to Business Rules section, Supplementary Specifications and individual NAVAID section in this document for requirements related to each NAVAID.

#### 2.1.10 Additional Information

There is no additional information for this use case.

#### 2.1.11 Business Rules

- 1. For each NAVAID record in the search result, system provides an ability, for users with appropriate access privileges, to directly navigate to:
  - a. edit display of that NAVAID record.
  - b. view display of that NAVAID record.
- 2. On the search result, the system provides an ability to directly navigate to the add NAVAID display for users with appropriate access privileges.

#### 2.2 Use Case Specification: Add NAVAID

#### 2.2.1 Brief Description

This use case describes the process of adding a NAVAID system record.

#### 2.2.2 Actors

Following are the actors for this use case:

1. Data Specialist

#### 2.2.3 Pre – conditions

- User must be logged in the system as one of the actors mentioned in section 2.2.2 above.
- 2. User has conducted 'Search NAVAID' process and found no matching records.
- 3. User must have the access privileges to add NAVAID information.

#### 2.2.4 Basic Flow of Events

- 1. User selects to navigate to the add display.
- 2. System prompts the user to select a NAVAID from a listing of different types of NAVAIDs.
- 3. User selects a particular NAVAID type.
- System prompts the user to enter the necessary information for the selected NAVAID type.
- 5. User enters the necessary information and selects to save the NAVAID record in the system.
- 6. System adds the NAVAID record and displays an appropriate message to the user.
- 7. If the system fails to add the NAVAID record with the information as entered by the user, system displays an appropriate message to the user.

#### 2.2.5 Alternate Flows

There are no alternate flows in this use case.

#### 2.2.6 Sub – flows

There are no sub-flows for this use case.

#### 2.2.7 Key Scenarios

There are no key scenarios for this use case.

#### 2.2.8 Post – conditions

1. A new NAVAID record is added to the system and is searchable.

#### 2.2.9 Extension Points

There are no extension points for this use case.

#### 2.2.10 Special Requirements

1. Refer to Business Rules section, Supplementary Specifications and individual NAVAID section in this document for requirements related to each NAVAID.

#### 2.2.11 Additional Information

#### 2.2.12 Business Rules

- 1. System will provide an ability, for users with appropriate access privileges, to:
  - a. navigate back to search display from the add display without adding a new record.
  - b. clear the entire user entered information and any dependent information before record is added to the system.
  - c. navigate to add component display from the add display after mandatory information for the NAVAID has been entered by the user in the system.
  - d. navigate to edit component display from the add display.
  - e. navigate to view component display from the add display.

#### 2.3 Use Case Specification: Edit NAVAID

#### 2.3.1 Brief Description

This use case describes the process of editing an existing NAVAID record.

#### 2.3.2 Actors

Following are the actors for this use case:

1. Data Specialist

#### 2.3.3 Pre - conditions

- User must be logged in the system as one of the actors mentioned in section 2.3.2 above.
- 2. User has conducted 'Search NAVAID' process and selected a NAVAID record for editing.
- 3. User must have the access privileges to edit NAVAID information.

#### 2.3.4 Basic Flow of Events

- 1. User selects to navigate to edit display for a particular NAVAID record.
- System invokes a service on the IFPA Enterprise requesting associated record(s) to the selected NAVAID.
- IFPA Enterprise finds no associated record(s) in a non-editable mode to the selected NAVAID record.
- 4. System displays the selected NAVAID record in the edit mode.
- 5. User makes the necessary changes to the record information and selects to save the changed NAVAID record in the system.
- 6. System saves the NAVAID record with the changed information and displays an appropriate message to the user.
- 7. If the system fails to save the NAVAID record with the changed information as entered by the user, system displays an appropriate message to the user.

#### 2.3.5 Alternate Flows

#### 2.3.5.1 Associated Record(s) from IFPA Enterprise

- 1. User selects to navigate to edit display for a particular NAVAID record.
- System invokes a service on the IFPA Enterprise requesting associated record(s) to the selected NAVAID.
- IFPA Enterprise returns a list of associated record(s) and their respective owner(s) to the selected NAVAID record.
- 4. System does not allow the edit of the NAVAID record and display the list of associated record(s) and their respective owner(s) to the user.

#### 2.3.6 Sub - flows

There are no sub-flows for this use case.

#### 2.3.7 Key Scenarios

There are no key scenarios for this use case.

#### 2.3.8 Post - conditions

1. A changed NAVAID record is saved to the system and is searchable based on the changed information.

#### 2.3.9 Extension Points

There are no extension points for this use case.

#### 2.3.10 Special Requirements

1. Refer to Business Rules section, Supplementary Specifications and individual NAVAID section in this document for requirements related to each NAVAID.

#### 2.3.11 Additional Information

There is no additional information for this use case.

#### 2.3.12 Business Rules

- 1. System will provide an ability, for users with appropriate access privileges, to:
  - a. navigate back to search display from the edit display without making any changes to the selected record.
  - b. cancel the changes made by user to the record before the changed record is saved to the system.
  - c. navigate add component display from the edit display.
  - d. navigate edit component display from the edit display.

#### 2.4 Use Case Specification: View NAVAID

#### 2.4.1 Brief Description

This use case describes the process of viewing an existing NAVAID record.

#### 2.4.2 Actors

Following are the actors for this use case:

1. Data Specialist

#### 2.4.3 Pre – conditions

- User must be logged in the system as one of the actors mentioned in section 2.4.2 above.
- User has conducted 'Search NAVAID' process and selected a NAVAID record for viewing.
- 3. User must have the access privileges to view NAVAID information.

#### 2.4.4 Basic Flow of Events

- 1. User selects to navigate to view display for a particular NAVAID system record.
- 2. System displays the selected NAVAID system record in the view mode.

#### 2.4.5 Alternate Flows

There are no alternate flows in this use case.

#### 2.4.6 Sub – flows

There are no sub-flows for this use case.

#### 2.4.7 Key Scenarios

There are no key scenarios for this use case.

#### 2.4.8 Post – conditions

There are no post-conditions for this use case.

#### 2.4.9 Extension Points

There are no extension points for this use case.

#### 2.4.10 Special Requirements

 Refer to Business Rules section, Supplementary Specifications and individual NAVAID section in this document for requirements related to each NAVAID.

#### 2.4.11 Additional Information

There is no additional information for this use case.

#### 2.4.12 Business Rules

- 1. System will provide an ability, for users with appropriate access privileges, to:
  - a. navigate back to search display from the view display.
  - b. navigate to view component record display from the view NAVAID display.
  - c. create new version of NAVAID record from the view NAVAID display.

#### 2.5 Use Case Specification: Delete NAVAID

#### 2.5.1 Brief Description

This use case describes the process of deleting an existing working or pending NAVAID system record. The delete here refers to the physical deletion of the NAVAID system record.

#### 2.5.2 Actors

Following are the actors for this use case:

1. Data Specialist

#### 2.5.3 Pre - conditions

- User must be logged in the system as one of the actors mentioned in section 2.5.2 above.
- 2. User has conducted 'Search NAVAID' process and selected a working or pending NAVAID record for deleting.
- 3. User must have the access privileges to delete NAVAID information.

#### 2.5.4 Basic Flow of Events

- User selects to delete a particular working or pending NAVAID system record from AIRNAV.
- System invokes a service on the IFPA Enterprise requesting associated record(s) to the selected NAVAID.
- 3. IFPA Enterprise finds no associated record(s) to the selected NAVAID record.
- 4. System deletes the selected NAVAID system record and all the child records from the system and displays an appropriate message to the user.
- 5. If the system fails to delete the selected NAVAID system record, system displays an appropriate message to the user.

#### 2.5.5 Alternate Flows

#### 2.5.5.1 Associated Record(s) from IFPA Enterprise

- User selects the NAVAID system record to be deleted
- 2. User selects to delete the selected NAVAID system record from AIRNAV.
- System invokes a service on the IFPA Enterprise requesting associated record(s) to the selected NAVAID record.
- 4. IFPA Enterprise returns a list of associated record(s) and their respective owner(s) to the selected NAVAID record.
- 5. System does not allow the delete of the NAVAID record and displays the list of associated record(s) and their respective owner(s) to the user.

#### 2.5.6 Sub - flows

There are no sub-flows for this use case.

#### 2.5.7 Key Scenarios

There are no key scenarios for this use case.

#### 2.5.8 Post – conditions

- 1. The selected NAVAID system record will be deleted from the system.
- 2. The deleted NAVAID system record will not be searchable in the system.

#### 2.5.9 Extension Points

There are no extension points for this use case.

#### 2.5.10 Special Requirements

1. Refer to Supplementary Specifications and individual NAVAID section in this document for requirements related to each NAVAID.

#### 2.5.11 Additional Information

#### 2.6 Use Case Specification: Activate NAVAID

#### 2.6.1 Brief Description

This use case describes the process of changing the status of a 'Pending' NAVAID record to 'Active'

#### 2.6.2 Actors

Following are the actors for this use case:

1. AIRNAV - Internal

#### 2.6.3 Pre-conditions

1. NAVAID record(s) in 'Publication' model with status 'Pending'.

#### 2.6.4 Basic Flow of Events

- 1. System retrieves the version of NAVAID records in 'Publication' model with status 'Pending' and publication date as the system date.
- System sets the status of currently 'Active' version of the NAVAID records, retrieved in step # 1 above, to 'History'.
- System sets the status of the retrieved version of NAVAID records, as per step # 1 above, to 'Active'.

#### 2.6.5 Alternate Flows

There are no alternate flows for this use case.

#### 2.6.6 Sub-flows

There are no sub-flows for this use case.

#### 2.6.7 Key Scenarios

There are no key scenarios for this use case.

#### 2.6.8 Post-conditions

- All the currently 'Active' version of the NAVAID records within the 'Publication' model, whose 'Pending' version will become active, are converted to 'History' version of the NAVAID records.
- 2. All the 'Pending' version of the NAVAID records within the 'Publication' model with publication date as system date are converted to 'Active' version of the NAVAID records.

#### 2.6.9 Extension Points

There are no extension points for this use case.

#### 2.6.10 Special Requirements

1. Refer to Supplementary Specifications and individual NAVAID section in this document for requirements related to each NAVAID.

#### 2.6.11 Additional Information

#### 2.7 Use Case Specification: Create NAVAID Version

#### 2.7.1 Brief Description

This use case describes the process of creating a new version of an existing NAVAID record.

#### 2.7.2 Actors

Following are the actors for this use case:

1. Data Specialist

#### 2.7.3 Pre-conditions

- User must be logged in the system as one of the actors mentioned in section 2.7.2 above.
- 2. User has conducted the 'View NAVAID' process for the selected NAVAID record.
- User must have the access privileges to create a new version of existing NAVAID information.

#### 2.7.4 Basic Flow of Events

- 1. User selects to create a new version of the NAVAID record.
- System prompts user to select the Component(s) to be versioned with the NAVAID record.
- System creates a new NAVAID record with status as 'Working' and displays the new NAVAID record in an edit mode.
- 4. User makes the necessary changes to the information of the newly created version of the NAVAID record and selects to save the NAVAID record in the system.
- 5. System saves the new version of the NAVAID record with the changed information and displays an appropriate message to the user.
- 6. If the system fails to save the new version of the NAVAID record with the changed information as entered by the user, system displays an appropriate message to the user.

#### 2.7.5 Alternate Flows

There are no alternate flows for this use case.

#### 2.7.6 Sub-flows

There no sub-flows for this use case.

#### 2.7.7 Key Scenarios

There are no key scenarios for this use case.

#### 2.7.8 Post-conditions

1. A new version of the record with status 'Working' is saved in the system.

#### 2.7.9 Extension Points

There are no extension points for this use case.

#### 2.7.10 Special Requirements

1. Refer to Supplementary Specifications and individual NAVAID section in this document for requirements related to each NAVAID.

#### 2.7.11 Additional Information

#### 2.8 Use Case Specification: Change Active NAVAID to History

#### 2.8.1 Brief Description

This use case describes the process of pushing an existing active NAVAID record to history status by system automatically.

#### 2.8.2 Actors

Following are the actors for this use case:

1. AIRNAV - Internal

#### 2.8.3 Pre-conditions

NAVAID record(s) in 'Publication' model with status 'Pending'.
 OR
 Active NAVAID record(s) with effective end date.

#### 2.8.4 Basic Flow of Events

- 1. System retrieves the version of NAVAID record(s) in 'Publication' model with status 'Pending' and publication date as the system date.
- 2. System retrieves the version of NAVAID record(s) in 'Publication' model with status 'Active' and effective end date as the system date.
- 3. System sets the status of currently 'Active' version of the NAVAID record(s), retrieved in step # 1 and # 2 above, to 'History'.

#### 2.8.5 Alternate Flows

There are no alternate flows for this use case.

#### 2.8.6 Sub-flows

There are no sub-flows for this use case.

#### 2.8.7 Key Scenarios

There are no key scenarios for this use case.

#### 2.8.8 Post-conditions

- All the currently 'Active' version of the NAVAID record(s) within the 'Publication' model, whose 'Pending' version will become active as their publication date is same as the system date, are converted to 'History' version of the NAVAID record(s).
- 2. All the 'Active' version of the NAVAID record(s) whose effective end date is same as system date are converted to 'History' version of the NAVAID record(s).

#### 2.8.9 Extension Points

There are no extension points for this use case.

#### 2.8.10 Special Requirements

1. Refer to Supplementary Specifications and individual NAVAID section in this document for requirements related to each NAVAID.

#### 2.8.11 Additional Information

#### 2.9 Use Case Specification: Search NAVAID Component

#### 2.9.1 Brief Description

This use case describes the process for searching NAVAID component record(s) in AIRNAV by a user.

#### 2.9.2 Actors

Following are the actors for this use case:

1. Data Specialist

#### 2.9.3 Pre-conditions

- The user must be logged in the system as one of the actors mentioned in section 2.9.2
- 2. User must have the access privileges to search NAVAID component information.

#### 2.9.4 Basic Flow of Events

- 1. User invokes the 'Search NAVAID Component' process within the 'NAVAID and Component' functionality in the system.
- System prompts the user to provide the search criteria for searching NAVAID Component, including but not limited to:
  - a. Component Type
  - b. NAVAID Identifier
  - c. Status
  - d. Airport
  - e. Runway
  - f. State
  - g. Country
- 3. User enters a value for any combination of search criterion at the same time and selects to retrieve the records.
- 4. System displays a complete listing of NAVAID component records, which satisfy the user entered search criteria, sorted by their type, identifier within type and status (order Active, Pending, Working) within identifier within type in a tabular format. The information displayed for each NAVAID component will be:
  - a. Component Type
  - b. NAVAID Identifier
  - c. NAVAID Type
  - d. Status
  - e. Airport
  - f. Runway
  - g. State
  - h. Country
- If no user records satisfy the user entered search criteria, system displays an appropriate message to the user.

#### 2.9.5 Alternate Flows

There are no alternate flows for this use case.

#### 2.9.6 Sub-flows

There are no sub-flows for this use case.

#### 2.9.7 Key Scenarios

There are no key scenarios for this use case.

#### 2.9.8 Post-conditions

There are no post conditions for this use case.

#### 2.9.9 Extension Points

There are no extension points for this use case.

#### 2.9.10 Special Requirements

 Refer to Business Rules section, Supplementary Specifications and individual NAVAID component section in this document for requirements related to each NAVAID component.

#### 2.9.11 Additional Information

There is no additional information for this use case.

#### 2.9.12 Business Rules

- 1. For each NAVAID component record in the search result, system will provide an ability, for users with appropriate access privileges, to directly navigate to
  - a. edit display of that NAVAID component record
  - b. view display of that NAVAID component record

#### 2.10 Use Case Specification: Add NAVAID Component

#### 2.10.1 Brief Description

This use case describes the process of adding a new NAVAID component record by a user.

#### 2.10.2 Actors

Following are the actors for this use case:

1. Data Specialist

#### 2.10.3 Pre-conditions

- 1. User must be logged in the system as one of the actors mentioned in section 2.10.2 above.
- 2. User is performing the 'Add NAVAID' or 'Edit NAVAID' process and selects to add a new NAVAID component.
- 3. User must have the access privileges to add NAVAID component information.

#### 2.10.4 Basic Flow of Events

- 1. User selects to navigate to the add component display.
- 2. System prompts the user to select a NAVAID component from a listing of different types of NAVAID Components.
- 3. User selects a particular NAVAID component type.
- System prompts the user to enter the necessary information for the selected NAVAID component type.
- 5. User enters the necessary information and selects to save the NAVAID component record in the system.
- 6. System adds the NAVAID component record and displays an appropriate message to the
- 7. If the system fails to add the NAVAID component record with the information as entered by the user, system displays an appropriate message to the user.

#### 2.10.5 Alternate Flows

There are no alternate flows in this use case.

#### 2.10.6 Sub-flows

There are no sub-flows for this use case.

#### 2.10.7 Key Scenarios

There are no key scenarios for this use case.

#### 2.10.8 Post-conditions

1. A new NAVAID component record is added to the system and is searchable.

#### 2.10.9 Extension Points

There are no extension points for this use case.

#### 2.10.10 Special Requirements

 Refer to Business Rules section, Supplementary Specifications and individual NAVAID component section in this document for requirements related to each NAVAID component.

#### 2.10.11 Additional Information

There is no additional information for this use case.

#### 2.10.12 Business Rules

- System will provide an ability, for users with appropriate access privileges, to clear the entire user entered information and any dependent information before record is added to the system.
- 2. If the user navigated to add NAVAID component from add NAVAID, system will provide an ability to navigate to add NAVAID display from the add NAVAID component display.
- 3. If the user navigated to add NAVAID component from edit NAVAID, system will provide an ability to navigate to edit NAVAID display from the add NAVAID component display.

#### 2.11 Use Case Specification: Edit NAVAID Component

#### 2.11.1 Brief Description

This use case describes the process of editing a NAVAID component record of the existing NAVAID system record.

#### 2.11.2 Actors

Following are the actors for this use case:

Data Specialist

#### 2.11.3 Pre – conditions

- User must be logged in the system as one of the actors mentioned in section 2.11.2 above.
- User has conducted 'Search NAVAID Component' process and has selected a component record for editing. OR
  - User is performing 'Add NAVAID' or 'Edit NAVAID' process and selects to edit the components associated with the NAVAID.
- 3. User must have the access privileges to edit NAVAID component information.

#### 2.11.4 Basic Flow of Events

- 1. User selects to navigate to edit NAVAID component display.
- 2. System invokes a service to the IFPA Enterprise requesting associated record(s) to the selected NAVAID component.
- 3. IFPA Enterprise finds no associated record(s) to the selected NAVAID component record.
- 4. System displays the selected NAVAID component record in the edit mode.
- 5. User makes the necessary changes to the record information and selects to save the changed NAVAID component record in the system.
- 6. System saves the NAVAID component record with the changed information and displays an appropriate message to the user.
- 7. If the system fails to save the NAVAID component record with the changed information as entered by the user, system displays an appropriate message to the user.

#### 2.11.5 Alternate Flows

#### 2.11.5.1 Associated Record(s) from IFPA Enterprise

- 1. User selects to navigate to edit display for a particular NAVAID component record.
- 2. System invokes a service to the IFPA Enterprise requesting associated record(s) to the selected NAVAID component.
- 3. IFPA Enterprise returns a list of associated record(s) and their respective owner(s) to the selected NAVAID component record.
- 4. System does not allow the edit of the NAVAID component record and displays the list of associated record(s) and their respective owner(s) to the user.

#### 2.11.6 Sub – flows

There are no sub-flows for this use case.

#### 2.11.7 Key Scenarios

There are no key scenarios for this use case.

#### 2.11.8 Post – conditions

 A changed NAVAID component record is saved to the system and is searchable based on the changed information.

#### 2.11.9 Extension Points

There are no extension points for this use case.

#### 2.11.10 Special Requirements

 Refer to Business Rules section, Supplementary Specifications and individual NAVAID component section in this document for requirements related to each NAVAID component.

#### 2.11.11 Additional Information

There is no additional information for this use case.

#### 2.11.12 Business Rules

- 1. System will provide an ability, for users with appropriate access privileges, to:
  - a. navigate back to search display from the edit display without making any changes to the selected record.
  - b. cancel the changes made by user to the record before the changed record is saved to the system.
- 2. If the user navigated to edit NAVAID component from add NAVAID, system will provide an ability to navigate to add NAVAID display from the edit NAVAID component display.
- 3. If the user navigated to edit NAVAID component from edit NAVAID, system will provide an ability to navigate to edit NAVAID display from the edit NAVAID component display.

#### 2.12Use Case Specification: View NAVAID Component

#### 2.12.1 Brief Description

This use case describes the process of viewing an existing NAVAID component record by a user.

#### 2.12.2 Actors

Following are the actors for this use case:

1. Data Specialist

#### 2.12.3 Pre-conditions

- User must be logged in the system as one of the actors mentioned in section 2.12.2 above.
- User has conducted 'Search NAVAID Component' process and has selected a component record for viewing.
  - User is performing 'Add NAVAID' or 'Edit NAVAID' or 'View NAVAID' process and selects to view the components associated with the NAVAID.
- 3. User must have the access privileges to view NAVAID component information.

#### 2.12.4 Basic Flow of Events

- 1. User selects to navigate to view display for a particular NAVAID component record.
- 2. System displays the selected NAVAID component record in the view mode.

#### 2.12.5 Alternate Flows

There are no alternate flows in this use case.

#### 2.12.6 Sub – flows

There are no sub-flows for this use case.

#### 2.12.7 Key Scenarios

There are no key scenarios for this use case.

#### 2.12.8 Post – conditions

There are no post-conditions for this use case.

#### 2.12.9 Extension Points

There are no extension points for this use case.

#### 2.12.10 Special Requirements

 Refer to Business Rules section, Supplementary Specifications and individual NAVAID component section in this document for requirements related to each NAVAID component.

#### 2.12.11 Additional Information

#### 2.12.12 Business Rules

- 1. System will provide an ability, for users with appropriate access privileges, to:
  - a. navigate back to search display from the view display.
  - b. create NAVAID component version from the view NAVAID component display.
- 2. If the user navigated to view NAVAID component from add NAVAID, system will provide an ability to navigate to add NAVAID display from the view NAVAID component display.
- 3. If the user navigated to view NAVAID component from edit NAVAID, system will provide an ability to navigate to edit NAVAID display from the view NAVAID component display.
- 4. If the user navigated to view NAVAID component from view NAVAID, system will provide an ability to navigate to view NAVAID display from the view NAVAID component display.

#### 2.13 Use Case Specification: Delete NAVAID Component

#### 2.13.1 Brief Description

This use case describes the process of deleting an existing working or pending NAVAID component record by a user. The delete here refers to the physical deletion of the NAVAID component record.

#### 2.13.2 Actors

Following are the actors for this use case:

1. Data Specialist

#### 2.13.3 Pre-conditions

- User must be logged in the system as one of the actors mentioned in section 2.13.2 above.
- User has conducted 'Search NAVAID Component' or 'Add NAVAID' or 'Edit NAVAID' process and selected a working or pending NAVAID component record for deleting.
- 3. User must have the access privileges to delete NAVAID component information.

#### 2.13.4 Basic Flow of Events

- User selects to delete a particular working or pending NAVAID component record from AIRNAV.
- 2. System invokes a service to the IFPA Enterprise requesting associated record(s) to the selected NAVAID component.
- 3. IFPA Enterprise finds no associated record(s) to the selected NAVAID component record.
- 4. System deletes the selected NAVAID component record from the system and displays an appropriate message to the user.
- 5. If the system fails to delete the selected NAVAID component record, system displays an appropriate message to the user.

#### 2.13.5 Alternate Flows

#### 2.13.5.1 Associated Record(s) from IFPA Enterprise

- 1. User selects the NAVAID component record to be deleted
- 2. User selects to delete the selected NAVAID component record from AIRNAV.
- 3. System invokes a service to the IFPA Enterprise requesting associated record(s) to the selected NAVAID component record.
- 4. IFPA Enterprise returns a list of associated record(s) and their respective owner(s) to the selected NAVAID component record.
- 5. System does not allow the delete of the NAVAID component record and displays the list of associated record(s) and their respective owner(s) to the user.

#### 2.13.5.2 Required NAVAID Component

- 1. User selects the NAVAID component record to be deleted
- 2. User selects to delete the selected NAVAID component record from AIRNAV.
- System checks whether the selected NAVAID component record is a required component of a NAVAID.
- The selected NAVAID component record is a required component of an existing NAVAID record.
- System does not allow the delete of the NAVAID component record and displays an appropriate message to the user.

#### 2.13.6 Sub – flows

There no sub-flows for this use case.

#### 2.13.7 Key Scenarios

There are no key scenarios for this use case.

#### 2.13.8 Post-conditions

- 1. The selected NAVAID component record will be deleted from the system.
- 2. The deleted NAVAID component record will not be searchable in the system.

#### 2.13.9 Extension Points

There are no extension points for this use case.

#### 2.13.10 Special Requirements

Refer to Supplementary Specifications and individual NAVAID component section in this
document for requirements related to each NAVAID component.

#### 2.13.11 Additional Information

## 2.14 Use Case Specification: Create NAVAID Component Version

#### 2.14.1 Brief Description

This use case describes the process of creating a new version of an existing NAVAID component record by a user.

#### 2.14.2 Actors

There is only one actor for this use case:

1. Data Specialist

#### 2.14.3 Pre-conditions

- 1. User must be logged in the system as one of the actors mentioned in section 4.14.2 above.
- 2. User has conducted the 'View NAVAID Component' process for the selected NAVAID component record.
- 3. User must have the access privileges to create NAVAID component version information.

#### 2.14.4 Basic Flow of Events

- 1. User selects to create a new version of the NAVAID component record.
- 2. System creates a new NAVAID component record with status as 'Working' and displays the new NAVAID component record in an edit mode.
- User makes the necessary changes to the information of the newly created version of the NAVAID component record and selects to save the NAVAID component record in the system.
- 4. System saves the new version of the NAVAID component record with the changed information and displays an appropriate message to the user.
- If the system fails to save the new version of the NAVAID component record with the changed information as entered by the user, system displays an appropriate message to the user.

#### 2.14.5 Alternate Flows

There are no alternate flows for this use case.

#### 2.14.6 **Sub-flows**

There no sub-flows for this use case.

#### 2.14.7 Key Scenarios

There are no key scenarios for this use case.

#### 2.14.8 Post-conditions

1. A new version of the record with status 'Working' is saved in the system.

#### 2.14.9 Extension Points

There are no extension points for this use case.

#### 2.14.10 Special Requirements

1. Refer to Supplementary Specifications and individual NAVAID component section in this document for requirements related to each NAVAID component.

#### 2.14.11 Additional Information

1. The system should not allow the creation of a new Component version on an Active NAVAID system.

# 2.15 Use Case Specification: Change Active NAVAID Component to History

#### 2.15.1 Brief Description

This use case describes the process of pushing an existing active NAVAID component record to history status by system automatically.

#### 2.15.2 Actors

Following are the actors for this use case:

1. AIRNAV - Internal

#### 2.15.3 Pre-conditions

 NAVAID component record(s) in 'Publication' model with status 'Pending'. OR

Active NAVAID component record(s) with effective end date.

#### 2.15.4 Basic Flow of Events

- 1. System retrieves the version of NAVAID component record(s) in 'Publication' model with status 'Pending' and publication date as the system date.
- 2. System retrieves the version of NAVAID component record(s) in 'Publication' model with status 'Active' and effective end date (cancelled) as the system date.
- 3. System sets the status of currently 'Active' version of the NAVAID component record(s), retrieved in step # 1 and # 2 above, to 'History'.

#### 2.15.5 Alternate Flows

There are no alternate flows for this use case.

#### 2.15.6 Sub-flows

There are no sub-flows for this use case.

#### 2.15.7 Key Scenarios

There are no key scenarios for this use case.

#### 2.15.8 Post-conditions

- All the currently 'Active' version of the NAVAID component record(s) within the 'Publication' model, whose 'Pending' version will become active as their publication date is same as the system date, are converted to 'History' version of the NAVAID component record(s).
- All the 'Active' version of the NAVAID component record(s) whose effective end date is same as system date are converted to 'History' version of the NAVAID component record(s).

#### 2.15.9 Extension Points

There are no extension points for this use case.

#### 2.15.10 Special Requirements

Refer to Supplementary Specifications and individual NAVAID component section in this
document for requirements related to each NAVAID component.

#### 2.15.11 Additional Information

#### 3 NAVAID Specific Business Rules

#### 3.1 ARSR

- 1. Following information, including but not limited to, will be captured for ARSR in AIRNAV:
  - a. General Information
    - i. NAVAID Type Mandatory information. Non-editable.
    - ii. NAVAID Identifier Mandatory information.
    - iii. Status Listing.
    - iv. Revision Number Mandatory information.
    - v. Commission Date
    - vi. Effective Date Mandatory information, Listing.
    - vii. Reconfiguration Date
    - viii. Effective End Date
    - ix. Decommission Date
    - x. Location Mandatory information.
    - xi. State Listing.
    - xii. Country Mandatory information. Listing.
    - xiii. Owner Listing.
    - xiv. Data Source Listing.
    - xv. Broadcast Identifier
  - b. Office Information
    - i. Flight Inspection Listing.
    - ii. Procedure Listing.
    - iii. Region Listing.
    - iv. Service Area Non-editable.
    - v. OCC Code Non-editable.
    - vi. Program Code Listing.
    - vii. ARTCC
      - 1. ARTCC Listing Multiple
  - c. Contact Information Multiple
    - i. Contact Role
    - ii. Prefix Name
    - iii. Last Name
    - iv. First Name
    - v. Middle Initial
    - vi. Suffix Name
    - vii. Organizational Name
    - viii. Address Line 1
    - ix. Address Line 2
    - x. City
    - xi. State Listing.
    - xii. Zip
    - xiii. Phone
    - xiv. Email
    - xv. Remarks
  - d. Comments Multiple
    - i. Priority
    - ii. Topic Listing.
    - iii. Date
    - iv. Remark
- 2. The following information will not be following the concept of temporality:
  - a. Office Information
  - b. Contact Information

#### 3.2 ASR

- 1. Following information, including but not limited to, will be captured for ASR in AIRNAV:
  - a. General Information
    - i. NAVAID Type Mandatory information. Non-editable.
    - ii. NAVAID Identifier Mandatory information.
    - iii. Model Mandatory information, Listing.
    - iv. Status Listing.
    - v. Revision Number Mandatory information.
    - vi. Commission Date
    - vii. Effective Date Mandatory information. Listing.
    - viii. Reconfiguration Date
    - ix. Effective End Date
    - x. Decommission Date
    - xi. Location Mandatory information.
    - xii. State Listing.
    - xiii. Country Mandatory information. Listing.
    - xiv. Owner Listing.
    - xv. Data Source Listing.
    - xvi. General Terrain Monitor Indicator
    - xvii. ARTS Listing
    - xviii. Broadcast Identifier
  - b. Office Information
    - i. Flight Inspection Listing.
    - ii. Procedure Listing.
    - iii. Region Listing.
    - iv. Service Area Non-editable.
    - v. OCC Code Non-editable.
    - vi. Program Code Listing.
    - vii. ARTCC
      - 1. ARTCC Listing Multiple
  - c. Contact Information Multiple
    - Contact Role
    - ii. Prefix Name
    - iii. Last Name
    - iv. First Name
    - v. Middle Initial
    - vi. Suffix Name
    - vii. Organizational Name
    - viii. Address Line 1
    - ix. Address Line 2
    - x. City
    - xi. State Listing.
    - xii. Zip
    - xiii. Phone
    - xiv. Email
    - xv. Remarks
  - d. Comments Multiple
    - i. Priority
    - ii. Topic Listing.
    - iii. Date
    - iv. Remark
- 2. The following information will not be following the concept of temporality:
  - a. Office Information

b. Contact Information

### 3.3 DF

- 1. Following information, including but not limited to, will be captured for DF in AIRNAV:
  - a. General Information
    - i. NAVAID Type Mandatory information. Non-editable.
    - ii. NAVAID Identifier Mandatory information.
    - iii. MagVar/Year
    - iv. Status Listing.
    - v. Class Listing
    - vi. Revision Number Mandatory information.
    - vii. Commission Date
    - viii. Effective Date Mandatory information. Listing.
    - ix. Reconfiguration Date
    - x. Effective End Date
    - xi. Decommission Date
    - xii. Location Mandatory information.
    - xiii. State Listing
    - xiv. Country Mandatory information. Listing
    - xv. Owner Listing.
    - xvi. Data Source Listing.
    - xvii. Broadcast Identifier
  - b. Monitor
    - i. Monitoring Full or Part-time Flag Listing
    - ii. Monitoring Location
    - iii. Hours of Operations
    - iv. Monitor Category Listing.
  - c. Office Information
    - i. Flight Inspection Listing.
    - ii. Procedure Listing.
    - iii. Region Listing.
    - iv. Service Area Non-editable.
    - v. OCC Code Non-editable.
    - vi. Program Code Listing.
    - vii. ARTCC
      - 1. ARTCC Listing Multiple
  - d. Contact Information Multiple
    - i. Contact Role
    - ii. Prefix Name
    - iii. Last Name
    - iv. First Name
    - v. Middle Initial vi. Suffix Name
    - vii. Organizational Name
    - viii. Address Line 1
    - ix. Address Line 2
    - x. City
    - xi. State Listing.
    - xii. Zip
    - xiii. Phone
    - xiv. Email
    - xv. Remarks
  - e. Comments Multiple
    - i. Priority
    - ii. Topic Listing.
    - iii. Date

#### iv. Remark

- 2. The system will allow user to select value in 'Monitoring Full or Part-time Flag', only if user has entered some value in 'Location'.
- 3. The system will allow user to select value in 'Hours of Operations', only if user has entered some value in 'Location'.
- 4. The following information will not be following the concept of temporality:
  - a. Offices
  - b. Contact Information

# 3.4 DME

- 1. Following information, including but not limited to, will be captured for DME in AIRNAV:
  - a. General Information
    - i. NAVAID Type Mandatory information. Non-editable.
    - ii. NAVAID Identifier Mandatory information.
    - iii. Model Mandatory information. Listing.
    - iv. Status Listing.
    - v. Revision Number Mandatory information.
    - vi. Commission Date
    - vii. Effective Date Mandatory information, Listing.
    - viii. Reconfiguration Date
    - ix. Effective End Date
    - x. Decommission Date
    - xi. Location Mandatory information.
    - xii. State Listing.
    - xiii. Country Mandatory information. Listing.
    - xiv. Class Listing.
    - xv. Data Source Listing
    - xvi. Owner Listing.
    - xvii. Temporary Mobile System Indicator
    - xviii. Broadcast Identifier
  - b. Monitor
    - i. Monitoring Full or Part-time Flag Listing
    - ii. Monitoring Location
    - iii. Hours of Operations
    - iv. Monitor Category Listing.
  - c. Office Information
    - i. Flight Inspection Listing.
    - ii. Procedure Listing.
    - iii. Region Listing.
    - iv. Service Area Non-editable.
    - v. OCC Code Non-editable.
    - vi. Program Code Listing.
    - vii. ARTCC
      - ARTCC Listing Multiple
  - d. Contact Information
    - i. Contact Role
    - ii. Prefix Name
    - iii. Last Name
    - iv. First Name
    - v. Middle Initial
    - vi. Suffix Name
    - vii. Organizational Name
    - viii. Address Line 1
    - ix. Address Line 2
    - x. City
    - xi. State Listing.
    - xii. Zip
    - xiii. Phone
    - xiv. Email
    - xv. Remarks
  - e. Comments
    - Priority
    - ii. Topic Listing.

- iii. Date
- iv. Remark
- 2. The system will allow user to select value in 'Monitoring Full or Part-time Flag', only if user has entered some value in 'Location'.
- 3. The system will allow user to select value in 'Hours of Operations', only if user has entered some value in 'Location'.
- 4. The following information will not be following the concept of temporality:
  - a. Office Information
  - b. Contact Information

### 3.5 FAN

- 1. Following information, including but not limited to, will be captured for FAN in AIRNAV:
  - a. General Information
    - i. NAVAID Type Mandatory information. Non-editable.
    - ii. NAVAID Identifier Mandatory information.
    - iii. Broadcast Identifier Mandatory information.
    - iv. Model Mandatory information. Listing.
    - v. Status Listing.
    - vi. Revision Number Mandatory information.
    - vii. Commission Date
    - viii. Effective Date Mandatory information. Listing.
    - ix. Reconfiguration Date
    - x. Effective End Date
    - xi. Decommission Date
    - xii. Location Mandatory information.
    - xiii. State Listing.
    - xiv. Country Mandatory information. Listing.
    - xv. Owner Listing.
    - xvi. Data Source Listing.
  - b. Contact Information
    - i. Contact Role
    - ii. Prefix Name
    - iii. Last Name
    - iv. First Name
    - v. Middle Initial
    - vi. Suffix Name
    - vii. Organizational Name
    - viii. Address Line 1
    - ix. Address Line 2
    - x. City
    - xi. State Listing.
    - xii. Zip
    - xiii. Phone
    - xiv. Email
    - xv. Remarks
  - c. Office Information
    - i. Flight Inspection Listing.
    - ii. Procedure Listing.
    - iii. Region Listing.
    - iv. Service Area Non-editable.
    - v. OCC Code Non-editable.
    - vi. Program Code Listing.
    - vii. ARTCC
      - 1. ARTCC Listing Multiple
  - d. Comments
    - i. Priority
    - ii. Topic Listing.
    - iii. Date
    - iv. Remark
- 2. Following information will not be following the concept of temporality:
  - a. Office Information
  - b. Contact Information

### 3.6 ILS

- 1. Following information, including but not limited to, will be captured for ILS in AIRNAV:
  - a. General Information
    - i. NAVAID Type Mandatory information. Non-editable.
    - ii. NAVAID Identifier Mandatory information.
    - iii. Status Listing.
    - iv. Revision Number Mandatory information.
    - v. Commission Date
    - vi. Effective Date Mandatory information. Listing.
    - vii. Reconfiguration Date
    - viii. Effective End Date
    - ix. Decommission Date
    - x. Category Mandatory information. Listing.
    - xi. Owner Listing.
    - xii. Data Source Listing.
    - xiii. Location Mandatory information.
    - xiv. State Listing.
    - xv. Country Mandatory information. Listing.
    - xvi. Broadcast Identifier
    - xvii. Runway Link.
      - 1. Display following:
        - a. Airport Identifier
        - b. Runway Number
        - c. Airport Location
        - d. State
        - e. Country
  - b. Monitor
    - i. Monitoring Full or Part-time Flag Listing.
    - ii. Monitor Location
    - iii. Hours of Operations
  - Contact Information
    - i. Contact Role
    - ii. Prefix Name
    - iii. Last Name
    - iv. First Name
    - v. Middle Initial
    - vi. Suffix Name
    - vii. Organizational Name
    - viii. Address Line 1
    - ix. Address Line 2
    - x. City
    - xi. State Listing.
    - xii. Zip
    - xiii. Phone
    - xiv. Email.
    - xv. Remarks
  - d. Office Information
    - i. Flight Inspection Listing.
    - ii. Procedure Listing.
    - iii. Region Listing.
    - iv. Service Area Non-editable.
    - v. OCC Code Non-editable.
    - vi. Program Code Listing.
    - vii. ARTCC

- 1. ARTCC Listing Multiple
- e. Comments
  - i. Priority
  - ii. Topic Listing.
  - iii. Date
  - iv. Remark
- Distances / Measure
  - i. FAF
    - 1. Distance to Threshold Pull from SIAP
    - 2. Tapeline Calculate
    - 3. Earth Curve Calculate
    - 4. MSL Altitude Calculate
  - ii. ILS-2 to Threshold
  - iii. Performance Class
    - 1. Class
    - 2. CAT III Structure Tolerance
    - 3. Service Integrity / Continuity
- 2. The Runway listing will be dynamically populated based on the airport selected.
- 3. The State will be automatically populated by system based on the information contained in the selected airport record.
- 4. The Country will be automatically populated by system based on the information contained in the selected airport record.
- 5. The system will allow user to select value in 'Monitoring Full or Part-time Flag', only if user has entered some value in 'Location'.
- The system will allow user to select value in 'Hours of Operations', only if user has entered some value in 'Location'.
- 7. The following information will not be following the concept of temporality:
  - a. Office Information
  - b. Contact Information

### 3.7 LOC

- 1. Following information, including but not limited to, will be captured for LOC in AIRNAV:
  - a. General Information
    - i. NAVAID Type Mandatory information. Non-editable.
    - ii. NAVAID Identifier Mandatory information.
    - iii. Status Listing.
    - iv. Revision Number Mandatory information.
    - v. Commission Date
    - vi. Effective Date Mandatory information. Listing.
    - vii. Reconfiguration Date
    - viii. Effective End Date
    - ix. Decommission Date
    - x. Category Mandatory information.
    - xi. Owner Listing.
    - xii. Location Mandatory information.
    - xiii. State Listing.
    - xiv. Country Mandatory information. Listing.
    - xv. Data Source Listing.
    - xvi. Broadcast Identifier
    - xvii. Runway Multiple Link.
      - 1. Display the following
        - a. Airport Identifier
        - b. Runway Number
  - b. Contact Information
    - i. Contact Role
    - ii. Prefix Name
    - iii. Last Name
    - iv. First Name
    - v. Middle Initial
    - vi. Suffix Name
    - vii. Organizational Name
    - viii. Address Line 1
    - ix. Address Line 2
    - x. City
    - xi. State Listing.
    - xii. Zip
    - xiii. Phone
    - xiv. Email
    - xv. Remarks
  - c. Office Information
    - i. Flight Inspection Listing.
    - ii. Procedure Listing.
    - iii. Region Listing.
    - iv. Service Area Non-editable.
    - v. OCC Code Non-editable.
    - vi. Program Code Listing.
    - vii. ARTCC
      - 1. ARTCC Listing Multiple
  - d. Monitor
    - Monitoring Full or Part-time Flag Listing.
    - ii. Monitor Location
    - iii. Hours of Operations
  - e. Comments
    - i. Priority

- ii. Topic Listing.
- iii. Date
- iv. Remark
- 2. The Runway listing will be dynamically populated based on the airport selected.
- 3. The State will be automatically populated by system based on the information contained in the selected airport record.
- 4. The Country will be automatically populated by system based on the information contained in the selected airport record.
- The system will allow the user to select value in 'Monitoring Full or Part-time Flag', only if user has entered some value in 'Location'.
- 6. The system will allow the user to select value in 'Hours of Operations', only if user has entered some value in 'Location'.
- 7. The following information will not be following the concept of temporality:
  - a. Office Information
  - b. Contact Information

# 3.8 MLS

- 1. Following information, including but not limited to, will be captured for MLS in AIRNAV:
  - a. General Information
    - i. NAVAID Type Mandatory information. Non-editable.
    - ii. NAVAID Identifier Mandatory information.
    - iii. Status Listing.
    - iv. Revision Number Mandatory information.
    - v. Commission Date
    - vi. Effective Date Mandatory information. Listing.
    - vii. Reconfiguration Date
    - viii. Effective End Date
    - ix. Decommission Date
    - x. Category Mandatory information.
    - xi. Location Mandatory information.
    - xii. State Listing.
    - xiii. Country Mandatory information. Listing.
    - xiv. Runway link.
- Display the following
  - Airport Identifier
  - 2. Runway Number
- xv. Owner Listing.
- xvi. Data Source Listing.
- xvii. Broadcast Identifier
- b. Office Information
  - i. Flight Inspection Listing.
  - ii. Procedure Listing.
  - iii. Region Listing.
  - iv. Service Area Non-editable.
  - v. OCC Code Non-editable.
  - vi. Program Code Listing.
  - vii. ARTCC
    - 1. ARTCC Listing Multiple
- c. Contact Information
  - Contact Role
  - ii. Prefix Name
  - iii. Last Name
  - iv. First Name
  - v. Middle Initial
  - vi. Suffix Name
  - vii. Organizational Name
  - viii. Address Line 1
  - ix. Address Line 2
  - x. City
  - xi. State Listing.
  - xii. Zip
  - xiii. Phone
  - xiv. Email
  - xv. Remarks
- d. Monitor
  - i. Monitoring Full or Part-time Flag Listing.
  - ii. Monitor Location
  - iii. Hours of Operations
- e. Comments

- i. Priority
- ii. Topic Listing.
- iii. Date
- iv. Remark
- f. Distances / Measures
  - i. Procedural Data
    - a. Pseudo Elevation (EL)
      - i. Latitude
      - ii. Longitude
    - b. Pseudo EL to Pseudo TH
    - c. Azimuth (AZ) Bearing Crosses C/L
    - d. Pseudo TH
      - i. Latitude
      - ii. Longitude
    - e. MAP-TH Distance
    - f. MAP-AZ Distance
    - g. MAP
      - i. Latitude
      - ii. Longitude
    - h. Inbound BRG Actual TH to AZ (True)
    - Inbound BRG MAP to AZ (True)
- g. Data Words
  - i. Basic
- a. 1
- i. Azimuth Distance to Threshold Non-editable.
- ii. Azimuth Prop Cvg Left Non-editable.
- iii. Azimuth Prop Cvg Right Non-editable.
- iv. Clearance Signal Type Listing.
- b. 2
- i. Minimum Glide Path Non-editable.
- ii. Azimuth Status Listing.
- iii. Elevation Status Listing.
- iv. DME Status Listing.
- v. Back Azimuth Status
- c. 3
- i. Azimuth Beam width
- ii. Elevation Beam width
- iii. DME Distance Non-editable.
- d. 4
- i. Azimuth Zero Degree Plane Non-editable.
- ii. Back Azimuth Zero Degree Plane Non-editable.
- e. 5
- i. Back Azimuth Prop Cvg Left Non-editable.
- ii. Back Azimuth Prop Cvg Right Non-editable.
- iii. Back Azimuth Beam width
- f. 6
- i. Ground Equipment Identifier Non-editable.
- ii. Auxiliary
- a. 1
- i. Azimuth Offset Non-editable.
- ii. Azimuth Distance to Datum Point Non-editable.
- iii. Azimuth Runway Alignment Non-editable.
- iv. Azimuth Coordinate System Non-editable.
- v. Azimuth Antenna Height

- b. 2
- i. Elevation Offset Non-editable.
- ii. Threshold Distance Datum Point Non-editable.
- iii. Elevation Height
- iv. Datum Point Elevation Non-editable.
- v. Threshold Height
- c. 3
- i. DME Distance Datum Point Non-editable.
- ii. DME Offset Non-editable.
- iii. DME Height
- Stop End Runway Distance Datum Point Noneditable.
- d. 4
- i. Back Azimuth Offset Non-editable.
- ii. Back Azimuth to Datum Point Non-editable.
- Back Azimuth Runway Alignment Noneditable.
- iv. Back Azimuth Coordinate System Listing.
- v. Back Azimuth Antenna Height
- 2. The system will allow user to select value in 'Monitoring Full or Part-time Flag', only if user has entered some value in 'Location'.
- 3. The system will allow user to select value in 'Hours of Operations', only if user has entered some value in 'Location'.
- 4. The following information will not be following the concept of temporality:
  - a. Office Information
  - b. Contact Information

# 3.9 MSBLS

- 1. Following information, including but not limited to, will be captured for MSBLS in AIRNAV:
  - a. General Information
    - i. NAVAID Type Mandatory information. Non-editable.
    - ii. NAVAID Identifier Mandatory information.
    - iii. Status Listing.
    - iv. Revision Number Mandatory information.
    - v. Commission Date
    - vi. Effective Date Mandatory information. Listing.
    - vii. Reconfiguration Date
    - viii. Effective End Date
    - ix. Decommission Date
    - x. Category Mandatory information.
    - xi. Location Mandatory information.
    - xii. State Listing.
    - xiii. Country Mandatory information. Listing.
    - xiv. Runway link.
- i. Display the following
  - 1. Airport Identifier
  - 2. Runway Number
- xv. MSBLS String Listing.
- xvi. Owner Listing.
- xvii. Data Source Listing.
- xviii. Broadcast Identifier
- b. Contact Information
  - Contact Role
  - ii. Prefix Name
  - iii. Last Name
  - iv. First Name
  - v. Middle Initial
  - vi. Suffix Name
  - vii. Organizational Name
  - viii. Address Line 1
  - ix. Address Line 2
  - x. City
  - xi. State Listing.
  - xii. Zip
  - xiii. Phone
  - xiv. Email
  - xv. Remarks
- c. Office Information
  - i. Flight Inspection Listing.
  - ii. Procedure Listing.
  - iii. Region Listing.
  - iv. Service Area Non-editable.
  - v. OCC Code Non-editable.
  - vi. Program Code Listing.
  - vii. ARTCC
    - 1. ARTCC Listing Multiple
- d. Comments
  - i. Priority
  - ii. Topic Listing.
  - iii. Date

- iv. Remark
- e. Distances / Measures
  - i. Distances / Offsets / Datum Heights-MDPT
    - a. ADPT
      - i. Distance to EDPT
      - ii. Offset EDPT
      - iii. Distance to TH
      - iv. Offset Runway
    - b. EDPT
      - i. Distance to TH
      - ii. Offset Runway
    - c. Elevation
      - i. Distance to EDPT
      - ii. Offset EDPT
      - iii. Distance to TH
      - iv. Offset runway
      - v. Datum Height
    - d. Azimuth
      - i. Distance to EDPT
      - ii. Offset EDPT
      - iii. Distance to TH
      - iv. Offset Runway
      - v. Datum Height
    - e. DME
      - i. Distance to EDPT
      - ii. Offset EDPT
      - iii. Distance to TH
      - iv. Offset Runway
      - v. Datum Height
    - f. TH
- i. Datum height
- f. Datum Points
  - i. Elevation Datum Point
    - a. Latitude
    - b. Longitude
    - c. Horizontal Datum Listing.
    - d. Vertical Datum Listing.
    - e. Elevation
    - f. Data Source Listing.
  - ii. Distance from Elevation Datum Point to
    - Elevation
    - b. Distance
    - c. Offset
    - d. Height
    - ii. Azimuth Datum Point
      - a. Latitude
      - b. Longitude
      - c. Horizontal Datum Listing.
      - d. Vertical Datum Listing.
      - e. Elevation
      - f. Data Source Listing.
  - iii. Distance from Azimuth / DME Datum Point to
    - a. Azimuth
    - b. Distance
    - c. Offset
    - d. Height

#### ii. DME

- a. Distance
- b. Offset
- c. Height
- 2. The Runway listing will be dynamically populated based on the airport selected.
- The State will be automatically populated by system based on the information contained in the selected airport record.
- The Country will be automatically populated by system based on the information contained in the selected airport record.
- 5. The following information will not be following the concept of temporality:
  - a. Office Information
  - b. Contact Information

### 3.10 NDB

- 1. Following information, including but not limited to, will be captured for NDB in AIRNAV:
  - General Information
    - i. NAVAID Type Mandatory information. Non-editable.
    - ii. NAVAID Identifier Mandatory information.
    - iii. Broadcast Identifier Mandatory information.
    - iv. Classification Mandatory information. Listing.
    - v. Status Listing.
    - vi. Revision Number Mandatory information.
    - vii. Commission Date
    - viii. Effective Date Mandatory information. Listing.
    - ix. Reconfiguration Date
    - x. Effective End Date
    - xi. Decommission Date
    - xii. Class Listing.
    - xiii. Location Mandatory information.
    - xiv. State Listing.
    - xv. Country Mandatory information. Listing.
    - xvi. Owner Listing.
    - xvii. Data Source Listing.
  - b. Contact Information
    - i. Contact Role
    - ii. Prefix Name
    - iii. Last Name
    - iv. First Name
    - v. Middle Initial
    - vi. Suffix Name
    - vii. Organizational Name
    - viii. Address Line 1
    - ix. Address Line 2
    - x. City
    - xi. State Listing.
    - xii. Zip
    - xiii. Phone
    - xiv. Email
    - xv. Remarks
  - c. Office Information
    - i. Flight Inspection Listing.
    - ii. Procedure Listing.
    - iii. Region Listing.
    - iv. Service Area Non-editable.
    - v. OCC Code Non-editable.
    - vi. Program Code Listing.
    - vii. ARTCC
      - 1. ARTCC Listing Multiple
  - d. Comments
    - i. Priority
    - ii. Topic Listing.
    - iii. Date
    - iv. Remark
- 2. Following information will not be following the concept of temporality:
  - a. Contact Information
  - b. Office Information

System will automatically designate a NDB system as LOM, LMM or LIM based on the designated use of Marker Beacon component of the NDB System.

### 3.11 PAR

- 1. Following information, including but not limited to, will be captured for PAR in AIRNAV:
  - a. General Information
    - i. NAVAID Type Mandatory information. Non-editable.
    - ii. NAVAID Identifier Mandatory information.
    - iii. Status Listing.
    - iv. Revision Number Mandatory information.
    - v. Commission Date
    - vi. Effective Date Mandatory information. Listing.
    - vii. Reconfiguration Date
    - viii. Effective End Date
    - ix. Decommission Date
    - x. State
    - xi. Country
    - xii. Runway link. Multiple
      - 1. Display the following
        - A. Airport Identifier
        - B. Runway Number
    - xiii. Glide Slope Exists Indicator
    - xiv. Owner Listing.
    - xv. Data Source Listing.
    - xvi. Broadcast Identifier
  - b. Contact Information
    - i. Contact Role
    - ii. Prefix Name
    - iii. Last Name
    - iv. First Name
    - v. Middle Initial
    - vi. Suffix Name
    - vii. Organizational Name
    - viii. Address Line 1
    - ix. Address Line 2
    - x. City
    - xi. State Listing.
    - xii. Zip
    - xiii. Phone
    - xiv. Email
    - xv. Remarks
  - c. Office Information
    - Flight Inspection Listing.
    - ii. Procedure Listing.
    - iii. Region Listing.
    - iv. Service Area Non-editable.
    - v. OCC Code Non-editable.
    - vi. Program Code Listing.
    - vii. ARTCC
      - 1. ARTCC Listing Multiple
  - d. Comments
    - i. Priority
    - ii. Topic Listing.
    - iii. Date
    - iv. Remark
- 2. System will force the user to associate at least one runway served with each PAR record.
- 3. System will allow the user to associate multiple runways served with each PAR record.

- 4. The attribute 'Glide Slope Exists Indicator' will be a display only attribute. This attribute will be set to 'Yes' or 'No' by the System based on whether the runway has an active ILS NAVAID or not.
- 5. The following information will not be following the concept of temporality:
  - a. Contact Information
  - b. Office Information

### 3.12SDF

- 1. Following information, including but not limited to, will be captured for LOC in AIRNAV:
  - b. General Information
    - i. NAVAID Type Mandatory information. Non-editable.
    - ii. NAVAID Identifier Mandatory information.
    - iii. Status Listing.
    - iv. Revision Number Mandatory information.
    - v. Commission Date
    - vi. Effective Date Mandatory information. Listing.
    - vii. Reconfiguration Date
    - viii. Effective End Date
    - ix. Decommission Date
    - x. Category Mandatory information.
    - xi. Owner Listing.
    - xii. Location Mandatory information.
    - xiii. State Listing.
    - xiv. Country Mandatory information. Listing.
    - xv. Data Source Listing.
    - xvi. Broadcast Identifier
    - xvii. Runway Multiple Link.
      - a. Display the following
        - 1. Airport Identifier
        - 2. Runway Number
  - c. Contact Information
    - i. Contact Role
    - ii. Prefix Name
    - iii. Last Name
    - iv. First Name
    - v. Middle Initial
    - vi. Suffix Name
    - vii. Organizational Name
    - viii. Address Line 1
    - ix. Address Line 2
    - x. City
    - xi. State Listing.
    - xii. Zip
    - xiii. Phone
    - xiv. Email
    - xv. Remarks
  - d. Office Information
    - i. Flight Inspection Listing.
    - ii. Procedure Listing.
    - iii. Region Listing.
    - iv. Service Area Non-editable.
    - v. OCC Code Non-editable.
    - vi. Program Code Listing.
    - vii. ARTCC
      - 1. ARTCC Listing Multiple
  - e. Monitor
    - i. Monitoring Full or Part-time Flag Listing.
    - ii. Monitor Location
    - iii. Hours of Operations
  - f. Comments
    - i. Priority

- ii. Topic Listing.
- iii. Date
- iv. Remark
- g. Distances / Measure
  - i. FAF
    - a. Distance to Threshold Pull from SIAP
    - b. Tapeline Calculate
    - c. Earth Curve Calculate
    - d. MSL Altitude Calculate
  - ii. ILS-2 to Threshold
- 2. The Runway listing will be dynamically populated based on the airport selected.
- 3. The State will be automatically populated by system based on the information contained in the selected airport record.
- 4. The Country will be automatically populated by system based on the information contained in the selected airport record.
- 5. The system will allow the user to select value in 'Monitoring Full or Part-time Flag', only if user has entered some value in 'Location'.
- 6. The system will allow the user to select value in 'Hours of Operations', only if user has entered some value in 'Location'.
- 7. The following information will not be following the concept of temporality:
  - a. Office Information
  - b. Contact Information

### 3.13 SECRA

- 1. Following information, including but not limited to, will be captured for SECRA in AIRNAV:
  - a. General Information
    - i. NAVAID Type Mandatory information. Non-editable.
    - ii. NAVAID Identifier Mandatory information.
    - iii. Broadcast Identifier Mandatory information.
    - iv. Model Mandatory information. Listing.
    - v. Status Listing.
    - vi. Revision Number Mandatory information.
    - vii. Commission Date
    - viii. Effective Date Mandatory information. Listing.
    - ix. Reconfiguration Date
    - x. Effective End Date
    - xi. Decommission Date
    - xii. Location Mandatory information.
    - xiii. State Listing.
    - xiv. Country Mandatory information. Listing.
    - xv. Owner Listing.
    - xvi. Data Source Listing.
  - b. Contact Information
    - i. Contact Role
    - ii. Prefix Name
    - iii. Last Name
    - iv. First Name
    - v. Middle Initial
    - vi. Suffix Name
    - vii. Organizational Name
    - viii. Address Line 1
    - ix. Address Line 2
    - x. City
    - xi. State Listing.
    - xii. Zip
    - xiii. Phone
    - xiv. Email
    - xv. Remarks
  - c. Office Information
    - i. Flight Inspection Listing.
    - ii. Procedure Listing.
    - iii. Region Listing.
    - iv. Service Area Non-editable.
    - v. OCC Code Non-editable.
    - vi. Program Code Listing.
    - vii. ARTCC
      - 1. ARTCC Listing Multiple
  - d. Comments
    - i. Priority
    - ii. Topic Listing.
    - iii. Date
    - iv. Remark
- 2. The following information will not be following the concept of temporality:
  - a. Contact Information
  - b. Office Information

#### 3.14 TACAN

- 1. Following information, including but not limited to, will be captured for TACAN in AIRNAV:
  - a. General Information
    - i. NAVAID Type Mandatory information. Non-editable.
    - ii. NAVAID Identifier Mandatory information.
    - iii. Broadcast Identifier Mandatory information.
    - iv. Model Mandatory information. Listing.
    - v. Status Listing.
    - vi. Revision Number Mandatory information.
    - vii. Commission Date
    - viii. Effective Date Mandatory information. Listing.
    - ix. Reconfiguration Date
    - x. Effective End Date
    - xi. Decommission Date
    - xii. Location Mandatory information.
    - xiii. State Listing.
    - xiv. Class Listing.
    - xv. Country Mandatory information. Listing.
    - xvi. Monitor Category Listing.
    - xvii. Owner Listing.
    - xviii. Data Source Listing.
  - b. Contact Information
    - i. Contact Role
    - ii. Prefix Name
    - iii. Last Name
    - iv. First Name
    - v. Middle Initial
    - vi. Suffix Name
    - vii. Organizational Name
    - viii. Address Line 1
    - ix. Address Line 2
    - x. City
    - xi. State Listing.
    - xii. Zip
    - xiii. Phone
    - xiv. Email
    - xv. Remarks
  - c. Office Information
    - i. Flight Inspection Listing.
    - ii. Procedure Listing.
    - iii. Region Listing.
    - iv. Service Area Non-editable.
    - v. OCC Code Non-editable.
    - vi. Program Code Listing.
    - vii. ARTCC
- a. ARTCC Listing Multiple
- d. Monitor
  - i. Monitoring Full or Part-time Flag Listing.
  - ii. Monitor Location
  - iii. Hours of Operations
- e. Comments
  - i. Priority
  - ii. Topic Listing.
  - iii. Date
  - iv. Remark

- 2. The system will allow user to select value in 'Monitoring Full or Part-time Flag', only if user has entered some value in 'Location'.
- 3. The system will allow user to select value in 'Hours of Operations', only if user has entered some value in 'Location'.
- 4. The Channel listing is display only. The data resides with the component. The display will consist of the following:
  - a. VOR Frequency
  - b. Channel
- 5. The following information will not be following the concept of temporality:
  - a. Contact Information
  - b. Office Information

### 3.15 TLS

- 1. Following information, including but not limited to, will be captured for TLS in AIRNAV:
  - a. General Information
    - i. NAVAID Type Mandatory information. Non-editable.
    - ii. NAVAID Identifier Mandatory information.
    - iii. MagVar/Year
    - iv. Status Listing.
    - v. Revision Number Mandatory information.
    - vi. Commission Date
    - vii. Effective Date Mandatory information. Listing.
    - viii. Reconfiguration Date
    - ix. Effective End Date
    - x. Decommission Date
    - xi. Category Mandatory information.
    - xii. Runway link.
      - a. Display the following
        - 1. Airport Identifier
        - 2. Runway Number
        - 3. State
        - 4. Country
    - xiii. Owner Listing.
    - xiv. Data Source Listing.
  - b. Contact Information
    - i. Contact Role
    - ii. Prefix Name
    - iii. Last Name
    - iv. First Name
    - v. Middle Initial
    - vi. Suffix Name
    - vii. Organizational Name
    - viii. Address Line 1
    - ix. Address Line 2
    - x. City
    - xi. State Listing.
    - xii. Zip
    - xiii. Phone
    - xiv. Email
    - xv. Remarks
  - c. Office Information
    - i. Flight Inspection Listing.
    - ii. Procedure Listing.
    - iii. Region Listing.
    - iv. Service Area Non-editable.
    - v. OCC Code Non-editable.
    - vi. Program Code Listing.
    - vii. ARTCC
      - 1. ARTCC Listing Multiple
  - d. Monitor
    - i. Monitoring Full or Part-time Flag Listing.
    - ii. Monitor Location
    - iii. Hours of Operations
  - e. Comments
    - i. Priority
    - ii. Topic Listing.

- iii. Date
- iv. Remark
- f. Distances / Measures
  - i. FAF
    - a. Distance to Threshold Pull from SIAP
    - b. Tapeline Calculate
    - c. Earth Curve Calculate
    - d. MSL Altitude Calculate
  - ii. ILS-2 to Threshold
  - i. Performance Class
    - a. Class
    - b. CAT III Structure Tolerance
    - c. Service Integrity / Continuity
- 2. The Runway listing will be dynamically populated based on the airport selected.
- 3. The State will be automatically populated by system based on the information contained in the selected airport record.
- 4. The Country will be automatically populated by system based on the information contained in the selected airport record.
- 5. The system will allow user to select value in 'Monitoring Full or Part-time Flag', only if user has entered some value in 'Location'.
- 6. The system will allow user to select value in 'Hours of Operations', only if user has entered some value in 'Location'.
- 7. The following information will not be following the concept of temporality:
  - a. Contact Information
  - b. Office Information

#### 3.16 VDME

- 1. Following information, including but not limited to, will be captured for VDME in AIRNAV:
  - a. General Information
    - i. NAVAID Type Mandatory information. Non-editable.
    - ii. NAVAID Identifier Mandatory information.
    - iii. MagVar/Year
    - iv. Status Listing.
    - v. Revision Number Mandatory information.
    - vi. Commission Date
    - vii. Effective Date Mandatory information. Listing.
    - viii. Reconfiguration Date
    - ix. Effective End Date
    - x. Decommission Date
    - xi. Location Mandatory information.
    - xii. State Listing.
    - xiii. Country Mandatory information. Listing.
    - xiv. Class Listing.
    - xv. Monitor Category Listing.
    - xvi. Owner Listing.
    - xvii. Data Source Listing.
  - b. Contact Information
    - i. Contact Role
    - ii. Prefix Name
    - iii. Last Name
    - iv. First Name
    - v. Middle Initial
    - vi. Suffix Name
    - vii. Organizational Name
    - viii. Address Line 1
    - ix. Address Line 2
    - x. City
    - xi. State Listing.
    - xii. Zip
    - xiii. Phone
    - xiv. Email
    - xv. Remarks
  - c. Office Information
    - i. Flight Inspection Listing.
    - ii. Procedure Listing.
    - iii. Region Listing.
    - iv. Service Area Non-editable.
    - v. OCC Code Non-editable.
    - vi. Program Code Listing.
    - vii. ARTCC
      - ARTCC Listing Multiple
  - d. Monitor
    - i. Monitoring Full or Part-time Flag Listing.
    - ii. Monitor Location
    - iii. Hours of Operations
  - e. Comments
    - i. Priority
    - ii. Topic Listing.
    - iii. Date
    - iv. Remark

- 2. The system will allow user to select value in 'Monitoring Full or Part-time Flag', only if user has entered some value in 'Location'.
- 3. The system will allow user to select value in 'Hours of Operations', only if user has entered some value in 'Location'.
- 4. The Frequency is display only. The data resides with the component. The display will consist of the following:
  - a. VOR Frequency
  - b. Channel
- 5. The following information will not be following the concept of temporality:
  - a. Contact Information
  - b. Office Information

### 3.17 VOR

- 1. Following information, including but not limited to, will be captured for VOR in AIRNAV:
  - a. General Information
    - i. NAVAID Type Mandatory information. Non-editable.
    - ii. NAVAID !dentifier Mandatory information.
    - iii. MagVar/Year
    - iv. Status Listing.
    - v. Revision Number Mandatory information.
    - vi. Commission Date
    - vii. Effective Date Mandatory information. Listing.
    - viii. Reconfiguration Date
    - ix. Effective End Date
    - x. Decommission Date
    - xi. Location Mandatory information.
    - xii. State Listing.
    - xiii. Class Listing.
    - xiv. Country Mandatory information. Listing.
    - xv. Monitor Category Listing.
    - xvi. Frequency Listing.
    - xvii. Owner Listing.
    - xviii. Data Source Listing.
  - b. Contact Information
    - i. Contact Role
    - ii. Prefix Name
    - iii. Last Name
    - iv. First Name
    - v. Middle Initial
    - vi. Suffix Name
    - vii. Organizational Name
    - viii. Address Line 1
    - ix. Address Line 2
    - x. City
    - xi. State Listing.
    - xii. Zip
    - xiii. Phone
    - xiv. Email
    - xv. Remarks
  - c. Office Information
    - i. Flight Inspection Listing.
    - ii. Procedure Listing.
    - iii. Region Listing.
    - iv. Service Area Non-editable.
    - v. OCC Code Non-editable.
    - vi. Program Code Listing.
    - vii. ARTCC
      - ARTCC Listing Multiple
  - d. Monitor
    - i. Monitoring Full or Part-time Flag Listing.
    - ii. Monitor Location
    - iii. Hours of Operations
  - e. Comments
    - i. Priority
    - ii. Topic Listing.

- iii. Date
- iv. Remark
- 2. The system will allow user to select value in 'Monitoring Full or Part-time Flag', only if user has entered some value in 'Location'.
- 3. The system will allow user to select value in 'Hours of Operations', only if user has entered some value in 'Location'.
- 4. The following information will not be following the concept of temporality:
  - a. Contact Information
  - b. Office Information

# 3.18 VORTAC

- Following information, including but not limited to, will be captured for VORTAC in AIRNAV:
  - a. General Information
    - i. NAVAID Type Mandatory information. Non-editable.
    - ii. NAVAID Identifier Mandatory information.
    - iii. Broadcast Identifier Mandatory information.
    - iv. Model Mandatory information. Listing.
    - v. Status Listing.
    - vi. Revision Number Mandatory information.
    - vii. Commission Date
    - viii. Effective Date Mandatory information. Listing.
    - ix. Reconfiguration Date
    - x. Effective End Date
    - xi. Decommission Date
    - xii. Location Mandatory information.
    - xiii. MagVar/Year
    - xiv. State Listing.
    - xv. Class Listing.
    - xvi. Country Mandatory information. Listing.
    - xvii. Monitor Category Listing.
    - xviii. Frequency Listing.
    - xix. Owner Listing.
    - xx. Data Source Listing.
  - b. Contact Information
    - i. Contact Role
    - ii. Prefix Name
    - iii. Last Name
    - iv. First Name
    - v. Middle Initial
    - vi. Suffix Name
    - vii. Organizational Name
    - viii. Address Line 1
    - ix. Address Line 2
    - x. Citv
    - xi. State Listing.
    - xii. Zip
    - xiii. Phone
    - xiv. Email
    - xv. Remarks
  - c. Office Information
    - i. Flight Inspection Listing.
    - ii. Procedure Listing.
    - iii. Region Listing.
    - iv. Service Area Non-editable.
    - v. OCC Code Non-editable.
    - vi. Program Code Listing.
    - vii. ARTCC
    - 1. ARTCC Listing Multiple
  - d. Monitor
    - i. Monitoring Full or Part-time Flag Listing.
    - ii. Monitor Location
    - iii. Hours of Operations
  - e. Comments

- i. Priority
- ii. Topic Listing.
- iii. Date
- iv. Remark
- 2. The system will allow user to select value in 'Monitoring Full or Part-time Flag', only if user has entered some value in 'Location'.
- 3. The system will allow user to select value in 'Hours of Operations', only if user has entered some value in 'Location'.
- 4. The Frequency is display only. The data resides with the component. The display will consist of the following:
  - a. VOR Frequency
  - b. Channel
- 5. The system will allow the user to select value in 'Qualifier' only if user has selected the 'Component' as 'TACAN'.
- 6. The following information will not be following the concept of temporality:
  - a. Contact Information
  - b. Office Information

#### 3.19 VOT

- 1. Following information, including but not limited to, will be captured for VOT in AIRNAV:
  - General Information
    - i. NAVAID Type Mandatory information. Non-editable.
    - ii. NAVAID Identifier Mandatory information.
    - iii. Broadcast Identifier Mandatory information.
    - iv. Model Mandatory information. Listing.
    - v. Status Listing.
    - vi. Revision Number Mandatory information.
    - vii. Commission Date
    - viii. Effective Date Mandatory information. Listing.
    - ix. Reconfiguration Date
    - x. Effective End Date
    - xi. Decommission Date
    - xii. Location Mandatory information.
    - xiii. MagVar/Year
    - xiv. State Listing.
    - xv. Class Listing.
    - xvi. Country Mandatory information. Listing.
    - xvii. Monitor Category Listing.
    - xviii. Frequency Listing.
    - xix. Owner Listing.
    - xx. Data Source Listing.
  - b. Contact Information
    - i. Contact Role
    - ii. Prefix Name
    - iii. Last Name
    - iv. First Name
    - v. Middle Initial
    - vi. Suffix Name
    - vii. Organizational Name
    - viii. Address Line 1
    - ix. Address Line 2
    - x. City
    - xi. State Listing.
    - xii. Zip
    - xiii. Phone
    - xiv. Email
    - xv. Remarks
  - c. Office Information
    - i. Flight Inspection Listing.
    - ii. Procedure Listing.
    - iii. Region Listing.
    - iv. Service Area Non-editable.
    - v. OCC Code Non-editable.
    - vi. Program Code Listing.
    - vii. ARTCC
      - ARTCC Listing Multiple
  - d. Monitor
    - i. Monitoring Full or Part-time Flag Listing.
    - ii. Monitor Location
    - iii. Hours of Operations
  - e. Comments
    - i. Priority

- ii. Topic Listing.
- iii. Date
- iv. Remark
- 2. The system will allow user to select value in 'Monitoring Full or Part-time Flag', only if user has entered some value in 'Location'.
- 3. The system will allow user to select value in 'Hours of Operations', only if user has entered some value in 'Location'.
- 4. The Frequency is display only. The data resides with the component. The display will consist of the following:
  - a. VOR Frequency
  - b. Channel
- 5. Following information will not be following the concept of temporality:
  - a. Contact Information
  - b. Office Information

# 4 NAVAID Component Specific Business Rules

#### 4.1 ARSR

- 1. Following information, including but not limited to, will be captured for ARSR component in AIRNAV:
  - a. General Information
    - i. Name
    - ii. MagVar/Year
  - b. Coordinates
    - i. Latitude
    - ii. Longitude
    - iii. Elevation
    - iv. Elevation Unit of Measure
    - v. Horizontal Datum Listing.
    - vi. Vertical Datum Listing
    - vii. Ellipsoid Elevation
    - viii. Ellipsoid Elevation Unit of Measure
    - ix. Ellipsoid Horizontal Datum Listing.
    - x. Ellipsoid Vertical Datum Listing
    - xi. Ellipsoid Model
  - c. Equipment Information
    - i. Channel Indicator Listing.
    - ii. Equipment Type Listing.
    - iii. Antenna Tilt Listing.
    - iv. Tilt Angle
    - v. Vertical Coverage
      - 1. Altitude
      - 2. Distance
      - 3. Azimuth
    - vi. Standby Power Listing.
    - vii. Serial Number
    - viii. ARTS Listing.
    - ix. Moving Target Indicator
    - x. Video Map Indicator
    - xi. Program Listing.
  - d. Radarscope Location Multiple
    - i. Radarscope Location
- 2. The following information will not be following the concept of temporality:
  - i. Equipment Information
  - ii. Radarscope Location
- 3. The following information will not be following the concept of temporality:
  - i. Equipment Information
  - ii. Radarscope Location
- 4. The attribute 'Channel Indicator' will have 2 options: Single and Dual.

# 4.2 ASR

- 1. Following information, including but not limited to, will be captured for ASR component in AIRNAV:
  - a. General information
    - i. Name
    - ii. MagVar/Year
    - iii. Military Use Only Indicator
    - iv. VFR Only Indicator
    - v. Special Use Only Listing.
    - vi. Special Aircraft Only Listing.
  - b. Coordinates
    - i. Latitude
    - ii. Longitude
    - iii. Elevation
    - iv. Elevation Unit of Measure
    - v. Horizontal Datum Listing.
    - vi. Vertical Datum Listing
    - vii. Ellipsoid Elevation
    - viii. Ellipsoid Elevation Unit of Measure
    - ix. Ellipsoid Horizontal Datum Listing.
    - x. Ellipsoid Vertical Datum Listing
    - xi. Ellipsoid Model
  - c. Equipment Information
    - i. Channel Indicator Listing.
    - ii. Equipment Type Listing.
    - iii. Antenna Tilt Listing.
    - iv. Tilt Angle
    - v. Vertical Coverage
      - 1. Altitude
      - 2. Distance
      - 3. Azimuth
    - vi. Standby Power Listing.
    - vii. Serial Number
    - viii. ARTS Listing.
    - ix. Moving Target Indicator
    - x. Video Map Indicator
    - xi. Program Listing.
  - d. Radarscope Location Multiple
    - i. Radarscope Location
- 2. The following information will not be following the concept of temporality:
  - i. Equipment Information
  - ii. Radarscope Location
- 3. The attribute 'Channel Indicator' will have 2 options: Single and Dual.

# 4.3 AZIMUTH

- 1. Following information, including but not limited to, will be captured for AZ component in AIRNAV:
  - a. General Information
    - i. Location
    - ii. Name
    - iii. MagVar/Year
    - iv. Phase Center Height
    - iv. Military Use Only Indicator

    - v. VFR Only Indicator
      vi. Special Use Only Listing.
    - vii. Special Aircraft Only Listing.
  - b. Equipment Information
    - i. Type Indicator Listing.
    - ii. Transmitter Indicator Listing.
    - iii. Monitor Category Listing.
    - iv. OCI Indicator
    - v. Equipment Type Listing.
    - vi. Other Equipment Type
    - vii. Antenna Type Listing.
    - viii. Channel
    - ix. Monitor Reference Limit
    - x. Program Code Listing
  - c. Coordinates
    - i. Latitude
    - ii. Longitude
    - iii. Elevation
    - iv. Elevation Unit of Measure
    - v. Horizontal Datum Listing.
    - vi. Vertical Datum Listing
    - vii. Ellipsoid Elevation
    - viii. Ellipsoid Elevation Unit of Measure
    - ix. Ellipsoid Horizontal Datum Listing.
    - x. Ellipsoid Vertical Datum Listing
    - xi. Ellipsoid Model
  - d. Course
    - i. Usable
      - Distance
      - 2. Altitude
    - ii. Proportional Cov
      - 1. 90 Hz
      - 2. 150 Hz0 Hz
    - iii. Clearance Cov
      - 1. 90 Hz
      - 2. 15
    - iv. Align From
    - v. Align To
  - e. Distance and Measures
    - i. Azimuth
      - 1. Antenna Offset
      - 2. Runway Angle
      - 3. True Heading
      - 4. Azimuth Distance To:
        - a. Threshold

- b. Stop End Runway
- c. Datum Point
- ii. Back Azimuth
  - 1. Antenna Offset
  - 2. Runway Angle
  - 3. True Heading
  - 4. Back Azimuth Distance To:
    - a. Threshold
    - b. Stop End Runway
    - c. Datum Point
- f. Restrictions
  - i. Effective Date
  - ii. Effective End Date
  - iii. Comments
- a. Priority
- b. Topic Listing.
- c. Date
- d. Remark
- iv. Restriction
- a. Azimuth From
- b. Azimuth To
- c. Distance Beyond
- d. Distance Within
- e. DME Beyond
- f. DME Within
- g. Altitude Above
- h. Altitude Below
- 3. The attribute 'Transmitter Indicator' will have 2 options: Single and Dual.
- 4. Following attributes will not apply to the AZ component record of the MSBLS NAVAID system:
  - g. Transmitter Indicator
  - h. OCI Indicator
  - i. Antenna Type
  - i. Elevation
  - k. Usable
    - i. Distance
    - ii. Altitude
  - I. Clearance Cov
    - i. 90 Hz
    - ii. 150 Hz
  - m. Align From
  - n. Align To
- 5. The attribute 'Type Indicator' will have 2 options: Azimuth and Back Azimuth.
- System will allow only one active AZ component record with type indicator selected as 'Azimuth' to be attached to a NAVAID system record at any given point of time
- 7. System will allow only one active AZ component record with type indicator selected as 'Back Azimuth' to be attached to a NAVAID system record at any given point of time.
- 8. The following information will not be following the concept of temporality:
  - a. Equipment Information
  - b. Restrictions

### 4.4 DF

- Following information, including but not limited to, will be captured for DF component in AIRNAV:
  - a. General Information
    - i. Name
    - ii. MagVar/Year
    - iii. Military Use Only Indicator
    - iv. VFR Only Indicator
    - v. Special Use Only Listing.
    - vi. Special Aircraft Only Listing.
  - b. Equipment Information
    - i. Equipment Type Listing
    - ii. Doppler Indicator
    - iii. Class Listing
    - iv. Voice Listing.
    - v. Rec Type Listing.
    - vi. Standby Power Listing.
    - vii. Program Code Listing.
    - viii. Frequency
  - c. Coordinates
    - i. Latitude
    - ii. Longitude
    - iii. Elevation
    - iv. Elevation Unit of Measure
    - v. Horizontal Datum Listing.
    - vi. Vertical Datum Listing
    - vii. Ellipsoid Elevation
    - viii. Ellipsoid Elevation Unit of Measure
    - ix. Ellipsoid Horizontal Datum Listing.
    - x. Ellipsoid Vertical Datum Listing
    - xi. Ellipsoid Model
  - d. Receiver Checkpoint
    - i. Type Mandatory information. Listing.
    - ii. Airport Id
    - iii. Altitude
    - iv. Distance Mandatory information.
    - v. Radial Mandatory information.
    - vi. Description Mandatory information.
  - e. Restrictions
    - i. Effective Start Date
    - ii. Effective End Date
    - iii. Comments
- a. Priority
- b. Topic Listing.
- c. Date
- d. Remark
- iv. Restriction
- a. Azimuth From
- b. Azimuth To
- c. Distance Beyond
- d. Distance Within
- e. Altitude Above
- f. Altitude Below

- 3. The attribute 'Altitude' within the Receiver Checkpoint section will be mandatory information, if user selects the value for the attribute 'Type' as 'Air'.
- 4. The attribute 'Altitude' within the Receiver Checkpoint section will not be required, if user selects the value for the attribute 'Type' as 'Ground'.
- 5. The following information will not be following the concept of temporality:
  - a. Equipment Information
  - b. Receiver Checkpoint
  - c. Restrictions

# 4.5 DME

- Following information, including but not limited to, will be captured for DME component in AIRNAV:
  - a. General information
    - i. Location
    - ii. Name
    - iii. MagVar/Year
    - iv. Channel
    - v. Phase Center Height
    - a. Military Use Only Indicator
    - b. VFR Only Indicator
    - c. Special Use Only Listing.
    - d. Special Aircraft Only Listing.
  - b. Equipment Information
    - i. Monitor Category Listing.
    - ii. Equipment Type Listing.
    - iii. Other Equipment Type
    - iv. Doppler Indicator
    - v. Class Listing.
    - vi. Transmitter Indicator Listing.
    - vii. Standby Power Listing.
    - viii. Program Listing.
  - c. Coordinates
    - i. Latitude
    - ii. Longitude
    - iii. Elevation
    - iv. Elevation Unit of Measure
    - v. Horizontal Datum Listing.
    - vi. Vertical Datum Listing
    - vii. Ellipsoid Elevation
    - viii. Ellipsoid Elevation Unit of Measure
    - ix. Ellipsoid Horizontal Datum Listing.
    - x. Ellipsoid Vertical Datum Listing
    - xi. Ellipsoid Model
  - d. Distances / Measures
    - a. Antenna Offset
    - b. FAF / Checkpoint (not MLS)
    - c. DME Distance To
- i. Threshold
- ii. Datum Point (MLS only)
- iii. Stop End of Runway
- d. Center Line Abeam (not MLS)
- o. Restrictions
  - i. Effective Date
  - ii. Effective End Date
  - iii. Comments
- a. Priority
- b. Topic Listing.
- c. Date
- d. Remark
- iv. Restriction
- a. Azimuth From
- b. Azimuth To
- c. Distance Beyond
- d. Distance Within

- e. DME Beyond
- f. DME Within
- g. Altitude Above
- h. Altitude Below
- Following attributes will not apply to the DME component record of the VDME, VORTAC, TACAN, NDB and DME NAVAID systems:
  - a. Location
  - b. Class
- Following attributes will not apply to the DME component record of the VDME, VORTAC, TACAN and DME NAVAID systems:
  - a. Monitor Category
- Following attributes will not apply to the DME component record of the MSBLS NAVAID systems:
  - a. Channel
  - b. Elevation
- 5. The attribute 'Transmitter Indicator' will have 2 options: Single and Dual.
- 6. Following attributes will only apply to the DME component record of the MSBLS NAVAID systems:
  - a. Phase Center Height
- System will allow the user to enter values for T2, only if the attribute 'Transmitter Indicator' is selected as 'Dual'.
- 8. The following information will not be following the concept of temporality:
  - a. Equipment Information
  - b. Restrictions

# 4.6 ELEV

- 1. Following information, including but not limited to, will be captured for ELEV component in AIRNAV:
  - a. General Information
    - i. Location
    - ii. Name
    - iii. MagVar/Year
    - iv. Military Use Only Indicator
    - v. VFR Only Indicator
    - vi. Special Use Only Listing.
    - vii. Special Aircraft Only Listing.
  - b. Equipment Information
    - i. Monitor Ref Limit
    - ii. Monitor Category
    - iii. Equipment Type Listing.
    - iv. Other Equipment Type
    - v. Transmitter Indicator Listing.
    - vi. Standby Listing.
    - vii. Program Listing.
  - c. Coordinates
    - i. Latitude
    - ii. Longitude
    - iii. Elevation
    - iv. Elevation Unit of Measure
    - v. Horizontal Datum Listing.
    - vi. Vertical Datum Listing
    - vii. Ellipsoid Elevation
    - viii. Ellipsoid Elevation Unit of Measure
    - ix. Ellipsoid Horizontal Datum Listing.
    - x. Ellipsoid Vertical Datum Listing
    - xi. Ellipsoid Model
    - xii. Phase Center Elevation
  - d. Course
    - i. Proportional Cov
      - 1. 90 Hz
      - 2. 150 Hz
  - e. Distances / Measures
    - i. Commissioned Angle
    - ii. Antenna Offset
    - iii. Threshold
    - iv. Stop End Runway
    - v. Datum Point Coordinates
      - 1. Latitude
      - 2. Longitude
    - vi. Threshold Crossing Height
    - vii. GPI Threshold
    - viii. Datum Point elevation
    - ix. Threshold To Point C
    - x. RPI Threshold
  - f. Restrictions
    - i. Effective Start Date
    - ii. Effective End Date
    - iii. Comments
- a. Priority

- b. Topic Listing.
- c. Date
- d. Remark
- iv. Restriction
- a. Azimuth From
- b. Azimuth To
- c. Distance Beyond
- d. Distance Within
- e. DME Beyond
- f. DME Within
- g. Altitude Above
- h. Altitude Below
- 2. Following attributes will not apply to the ELEV component record of the MLS NAVAID system:
  - a. All the attributes under the 'Course' section.
- 3. Following attributes will not apply to the ELEV component record of the MSBLS NAVAID system:
  - a. Transmitter Indicator
- 4. The attribute 'Transmitter Indicator' will have 2 options: Single and Dual.
- 5. The following information will not be following the concept of temporality:
  - a. Equipment Information
  - b. Receiver Checkpoint
  - c. Restrictions

### 4.7 FAN

- 1. Following information, including but not limited to, will be captured for FAN component in AIRNAV:
  - a. General Information
    - i. Location
    - ii. Name
  - b. Equipment Information
    - i. Monitor Category Listing.
    - ii. Standby Power Listing.
    - iii. Transmitter Indicator Listing.
    - iv. Width
    - v. Program Code Listing.
  - c. Coordinates
    - i. Latitude
    - ii. Longitude
    - iii. Elevation
    - iv. Elevation Unit of Measure
    - v. Horizontal Datum Listing.
    - vi. Vertical Datum Listing
    - vii. Ellipsoid Elevation
    - viii. Ellipsoid Elevation Unit of Measure
    - ix. Ellipsoid Horizontal Datum Listing.
    - x. Ellipsoid Vertical Datum Listing
    - xi. Ellipsoid Model
- 2. The attribute 'Transmitter Indicator' will have 2 options: Single and Dual.
- 3. The system will allow user to select value in 'Monitoring Full or Part-time Flag', only if user has entered some value in 'Location'.
- 4. The system will allow user to select value in 'Hours of Operations', only if user has entered some value in 'Location'.
- 5. The following information will not be following the concept of temporality:
  - a. Equipment Information

### 4.8 GS

- 1. Following information, including but not limited to, will be captured for GS component in AIRNAV:
  - a. General Information
    - i. Location
    - ii. Name
    - iii. MagVar/Year
    - a. Military Use Only Indicator
    - b. VFR Only Indicator
    - c. Special Use Only Listing.
    - d. Special Aircraft Only Listing.
    - e. Type Indicator
  - b. Equipment Information
    - i. Monitor Category Listing.
    - ii. Equipment Type Listing.
    - iii. Antenna Type Listing.
    - iv. Transmitter Indicator Listing.
    - v. Dual Frequency Indicator Listing.
    - vi. Frequency Listing.
    - vii. Standby Power Listing.
    - viii. Program Listing.
    - ix. CBP-TH Listing.
  - c. Coordinates
    - i. Latitude
    - ii. Longitude
    - iii. Elevation
    - iv. Elevation Unit of Measure
    - v. Horizontal Datum Listing.
    - vi. Vertical Datum Listing
    - vii. Ellipsoid Elevation
    - viii. Ellipsoid Elevation Unit of Measure
    - ix. Ellipsoid Horizontal Datum Listing.
    - x. Ellipsoid Vertical Datum Listing
    - xi. Ellipsoid Model
  - d. Point 47 Data
    - i. Commissioned IAW 8240. Listing.
    - ii. Reference Datum Height
    - iii. Used Indicator
    - iv. Reference Elevation Used For Flight Inspection
    - v. Achieved Reference Datum Height
    - vi. Used Indicator
    - vii. GPI Threshold
    - viii. Exception to 3ft. Rule Indicator
    - ix. Date Applied
  - e. Distances / Measures
    - a. Antenna Offset
    - b. Glide Slope Distance To
      - i. Threshold
      - ii. Inner Marker
      - iii. Middle Marker
      - iv. Outer Marker
      - v. LOC
      - vi. FAF
    - c. AFIS Coordinates Listing.

- d. Commissioned Angle
- e. AFIS Height
- f. Type Elevation Used for Calculations Listing.
- g. Threshold Crossing Height
- h. Ground Point Intercept Threshold
- Elevation Value Used for Calculations Non-editable.
- i. Threshold To Point C
- k. Runway Point Intercept Threshold
- I. Decision Height Display only Pull from SIAP
  - i. 100
- 1. Distance
- 2. Radio Altitude
- ii. 150
- 1. Distance
- Radio Altitude
- iii. 200
- 1. Distance
- 2. Radio Altitude
- m. Monitor Angle
  - i. High
  - ii. Low
- n. Aiming Point Coordinates
  - i. Latitude
  - ii. Longitude
- o. Elevation Abeam Center Line
- p. Procedural Data
  - a. Pseudo GS
    - i. Latitude
    - ii. Longitude
  - b. Pseudo GS to Pseudo TH
  - c. Pseudo TH
    - iii. Latitude
    - iv. Longitude
- d. Restrictions
  - i. Effective Start Date
  - ii. Effective End Date
  - iii. Comments
- a. Priority
- b. Topic Listing.
- c. Date
- d. Remark
- iv. Restriction
- a. Azimuth From
- b. Azimuth To
- c. Distance Beyond
- d. Distance Within
- e. DME Beyond
- f. DME Within
- g. Altitude Above
- h. Altitude Below
- 2. The attribute 'Type Indicator' will have only 2 values: Actual and Apparent.
- System will automatically set the attribute 'Type Indicator' to 'Actual', when this component is added to an ILS NAVAID system record.

- 4. System will automatically set the attribute 'Type Indicator' to 'Apparent', when this component is added to a TLS NAVAID system record.
- 5. The attribute 'Transmitter Indicator' will have 2 options: Single and Dual.
- 6. The 'Antenna Offset' will capture the direction (Left or Right) and the distance as a positive whole number only.
- 7. The following information will not be following the concept of temporality:
  - a. Equipment Information
  - b. Restrictions

# 4.9 LOC

- Following information, including but not limited to, will be captured for LOC component in AIRNAV:
  - a. General Information
    - i. Location
    - ii. Name
    - iii. MagVar/Year
    - iv. Type Indicator
    - v. Frequency Listing.
    - vi. Military Use Only Indicator
    - vii. VFR Only Indicator
    - viii. Special Use Only Listing.
    - ix. Special Aircraft Only Listing.
  - b. Equipment Information
    - i. Monitor Category Listing.
    - ii. Equipment Type Listing.
    - iii. Antenna Type Listing.
    - iv. Transmitter Indicator Listing.
    - v. Voice Listing.
    - vi. Dual Frequency Indicator Listing.
    - vii. Rec Type Listing.
    - viii. Standby Power
    - ix. Program Code Listing.
    - x. Rollout Listing.
  - c. Coordinates
    - i. Latitude
    - ii. Longitude
    - iii. Elevation
    - iv. Elevation Unit of Measure
    - v. Horizontal Datum Listing.
    - vi. Vertical Datum Listing
    - vii. Ellipsoid Elevation
    - viii. Ellipsoid Elevation Unit of Measure
    - ix. Ellipsoid Horizontal Datum Listing.
    - x. Ellipsoid Vertical Datum Listing
    - xi. Ellipsoid Model
  - d. Course
    - i. Type Listing.
    - ii. Usable
      - 1. Distance
      - 2. Altitude
    - iii. Clearance Cov
      - 1. 90 Hz
      - 2. 150 Hz
    - iv. Back Course Status Listing.
    - v. FAF Description Last Update
    - vi. Align From
    - vii. Alian To
  - e. Distances / Measures
    - i. Runway
    - ii. Apparent Indicator
    - iii. Antenna Offset
    - iv. Localizer Distance To
      - 1. Threshold
      - 2. Stop End of Runway

- 3. Inner Marker
- 4. Middle Marker
- 5. Outer Marker
- 6. FAF
- v. LDA Indicator
- vi. True Bearings
  - 1. FC
  - 2. BC
- vii. Monitor Wide
- viii. Monitor Narrow
- ix. LCW
- x. LCW Threshold
- xi. LCW Tailored Non-editable
- xii. Procedural Data
  - 1. LOC Bearing Crosses C/L
- xiii. FAF
  - 1. Distance to Threshold Pull from SIAP
  - 2. Tapeline Calculate
  - 3. Earth Curve Calculate
  - 4. MSL Altitude Calculate
- xiv. ILS-2 to Threshold
- f. Restrictions
  - i. Service Date
  - ii. Comments
- a. Priority
- b. Topic Listing.
- c Date
- d. Remark
- iii. Restriction
- a. Azimuth From
- b. Azimuth To
- c. Distance Beyond
- d. Distance Within
- e. DME Beyond
- f. DME Within
- g. Altitude Above
- h. Altitude Below
- 2. The following Restrictions have no temporality.
- 3. The attribute 'Type Indicator' will have only 2 values: Actual and Apparent.
- System will automatically set the attribute 'Type Indicator' to 'Actual', when this
  component is added to an ILS NAVAID system record.
- 5. System will automatically set the attribute 'Type Indicator' to 'Apparent', when this component is added to a TLS NAVAID system record.
- 6. The attribute 'Transmitter Indicator' will have 2 options: Single and Dual.
- 7. The system will allow user to select any value for the attribute 'Back Course Status', only if the attribute 'Type' is selected as 'Back'.
- 8. The 'Antenna Offset' will capture the direction (Left or Right) and the distance as a positive whole number only.
- 9. The system will allow the user to select value in 'Qualifier' only if user has selected the 'Component' as 'LOC'.
- 10. The following information will not be following the concept of temporality:
  - a. Equipment Information
  - b. Restrictions

### 4.10 MB

- 1. Following information, including but not limited to, will be captured for MB component in AIRNAV:
  - a. General Information
    - i. Name
    - ii. MagVar/Year
  - b. Equipment Information
    - i. Monitor Category Listing.
    - ii. Standby Power Listing.
    - iii. Transmitter Indicator Listing.
    - iv. Width
    - v. Program Listing.
    - vi. Used As Listing.
  - c. Coordinates
    - i. Latitude
    - ii. Longitude
    - iii. Elevation
    - iv. Elevation Unit of Measure
    - v. Horizontal Datum Listing.
    - vi. Vertical Datum Listing
    - vii. Ellipsoid Elevation
    - viii. Ellipsoid Elevation Unit of Measure
    - ix. Ellipsoid Horizontal Datum Listing.
    - x. Ellipsoid Vertical Datum Listing
    - xi. Ellipsoid Model
  - d. Distance and Measures
    - i. Inner Marker
    - ii. Distance to Threshold
    - iii. Antenna Offset
    - iv. Tapeline
    - v. Earth Curve
    - vi. MSL Altitude
      - Middle Marker
        - a. Distance to Threshold
        - b. Antenna Offset
        - c. Tapeline
        - d. Earth Curve
        - e. MSL Altitude
      - 2. Outer Marker
        - a. Distance to Threshold
        - b. Antenna Offset
        - c. Tapeline
        - d. Earth Curve
        - e. MSL Altitude
- 2. The attribute 'Transmitter Indicator' will have 2 options: Single and Dual.
- 3. The attribute 'Used As' will have following options: Outer Marker, Middle Marker and inner Marker.
- 4. The system will allow user to select value in 'Monitoring Full or Part-time Flag', only if user has entered some value in 'Location'.
- 5. The system will allow user to select value in 'Hours of Operations', only if user has entered some value in 'Location'.
- 6. The following information will not be following the concept of temporality:
  - a. Equipment Information

#### 4.11 NDB

- Following information, including but not limited to, will be captured for NDB component in AIRNAV:
  - a. General Information
    - i. Name
    - ii. MagVar/Year
    - iii. Frequency
    - iv. Military Use Only Indicator
    - v. VFR Only Indicator
    - vi. Special Use Only Listing.
    - vii. Special Aircraft Only Listing.
  - b. Equipment Information
    - i. Monitor Category Listing.
    - ii. Voice Listing.
    - iii. Transmitter Indicator Listing.
    - iv. Rec Type Listing.
    - v. Standby Listing.
    - vi. Program Listing.
  - c. Coordinates
    - i. Latitude
    - ii. Longitude
    - iii. Elevation
    - iv. Elevation Unit of Measure
    - v. Horizontal Datum Listing.
    - vi. Vertical Datum Listing
    - vii. Ellipsoid Elevation
    - viii. Ellipsoid Elevation Unit of Measure
    - ix. Ellipsoid Horizontal Datum Listing.
    - x. Ellipsoid Vertical Datum Listing
    - xi. Ellipsoid Model
  - d. Restrictions
    - i. Service Date
    - ii. Comments
- a. Priority
- b. Topic Listing.
- c. Date
- d. Remark
- iii. Restriction
- a. Azimuth From
- b. Azimuth To
- c. Distance Beyond
- d. Distance Within
- e. DME Beyond
- f. DME Within
- g. Altitude Above
- h. Altitude Below
- 2. The attribute 'Transmitter Indicator' will have 2 options: Single and Dual.
- 3. The system will allow user to select value in 'Monitoring Full or Part-time Flag', only if user has entered some value in 'Location'.
- 4. The system will allow user to select value in 'Hours of Operations', only if user has entered some value in 'Location'.
- 5. The following information will not be following the concept of temporality:
  - a. Equipment Information
  - b. Restrictions

### 4.12 PAR

- 1. Following information, including but not limited to, will be captured for PAR component in AIRNAV:
  - a. General Information
    - i. Location
    - ii. Name
    - iii. MagVar/Year
    - iv. Channel Indicator Listing.
    - v. Military Use Only Indicator
    - vi. VFR Only Indicator
    - vii. Special Use Only Listing.
    - viii. Special Aircraft Only Listing.
  - b. Equipment Information
    - i. Equipment Type Listing.
    - ii. Moving Target Indicator
    - iii. Serial Number
    - iv. Standby Power Listing.
    - v. Program Code Listing.
  - c. Coordinates
    - i. Latitude
    - ii. Longitude
    - iii. Elevation
    - iv. Elevation Unit of Measure
    - v. Horizontal Datum Listing.
    - vi. Vertical Datum Listing
    - vii. Ellipsoid Elevation
    - viii. Ellipsoid Elevation Unit of Measure
    - ix. Ellipsoid Horizontal Datum Listing.
    - x. Ellipsoid Vertical Datum Listing
    - xi. Ellipsoid Model
  - d. Distance and Measures
    - i. Antenna Offset
    - ii. Angle
    - iii. Ground Point Intercept Coordinates
      - a. Latitude
      - b. Longitude
    - iv. Ground Point Intercept Threshold
    - v. Threshold Crossing Height
  - e. Touchdown Reflector
    - i. Latitude
    - ii. Longitude
    - iii. Elevation
  - f. RPI Elevation
  - q. Restrictions
    - i. Service Date
    - ii. Comments
      - 1. Priority
      - 2. Topic Listing.
      - 3. Date
      - 4. Remark
    - iii. Restriction
      - 1. Azimuth From
      - 2. Azimuth To
      - 3. Distance Beyond
      - 4. Distance Within

- 5. DME Beyond
- 6. DME Within
- 7. Altitude Above
- 8. Altitude Below
- 2. The attribute 'Channel Indicator' will have 2 options: Single and Dual.
- 3. The following information will not be following the concept of temporality:
  - a. Equipment Information
  - b. Restrictions
  - c. Touchdown Reflector

### 4.13 SDF

- Following information, including but not limited to, will be captured for SDF component in AIRNAV:
  - a. General Information
    - i. Location
    - ii. Monitor Category Listing.
    - iii. Name
    - iv. MagVar/Year
    - v. Military Use Only Indicator
    - vi. VFR Only Indicator
    - vii. Special Use Only Listing.
    - viii. Special Aircraft Only Listing.
  - b. Equipment Information
    - i. Transmitter Indicator Listing.
    - ii. Equipment Type Listing.
    - iii. Antenna Type Listing.
    - iv. Voice Listing.
    - v. Dual Frequency Indicator Listing.
    - vi. Frequency Listing.
    - vii. Rec Type Listing.
    - viii. Standby Power Listing.
    - ix. Program Code Listing.
  - c. Coordinates
    - i. Latitude
    - ii. Longitude
    - iii. Elevation
    - iv. Elevation Unit of Measure
    - v. Horizontal Datum Listing.
    - vi. Vertical Datum Listing
    - vii. Ellipsoid Elevation
    - viii. Ellipsoid Elevation Unit of Measure
    - ix. Ellipsoid Horizontal Datum Listing.
    - x. Ellipsoid Vertical Datum Listing
    - xi. Ellipsoid Model
  - d. Course
    - i. Type Listing.
    - ii. Usable
      - 1. Distance
      - 2. Altitude
    - iii. Clearance Cov
      - 1. 90 Hz
      - 2. 150 Hz
    - iv. Back Course Status Listing.
    - v. FAF Description Last Update
    - vi. Align From
    - vii. Align To
  - e. Restrictions
    - i. Service Date
    - ii. Comments
- a. Priority
- b. Topic Listing.
- c. Date
- d. Remark
- iii. Restriction

- a. Azimuth From
- b. Azimuth To
- c. Distance Beyond
- d. Distance Within
- e. DME Beyond
- f. DME Within
- g. Altitude Above
- h. Altitude Below
- 2. The attribute 'Transmitter Indicator' will have 2 options: Single and Dual.
- 3. The system will allow user to select any value for the attribute 'Back Course Status', only if the attribute 'Type' is selected as 'Back'.
- 4. The following information will not be following the concept of temporality:
  - a. Equipment Information
  - b. Restrictions

# 4.14 SECRA

- 1. Following information, including but not limited to, will be captured for SECRA component in AIRNAV:
  - a. General Information
    - i. Name
    - ii. MagVar/Year
    - iii. Military Use Only Indicator
    - iv. VFR Only Indicator
    - v. Special Use Only Listing.
    - vi. Special Aircraft Only Listing.
  - b. Equipment Information
    - i. Equipment Type Listing.
    - ii. Channel Indicator Listing.
    - iii. Vertical Coverage
      - 1. Altitude
      - 2. Distance
      - 3. Azimuth
    - iv. Antenna Tilt Listing.
    - v. Tilt Angle
    - vi. Standby Power Listing.
    - vii. Serial Number
    - viii. ARTS Listing.
    - ix. Moving Target Indicator
    - x. Video Map Indicator
    - xi. Program Code Listing.
  - c. Radarscope Location Multiple
    - i. Radarscope Location
  - d. Coordinates
    - i. Latitude
    - ii. Longitude
    - iii. Elevation
    - iv. Elevation Unit of Measure
    - v. Horizontal Datum Listing.
    - vi. Vertical Datum Listing
    - vii. Ellipsoid Elevation
    - viii. Ellipsoid Elevation Unit of Measure
    - ix. Ellipsoid Horizontal Datum Listing.
    - x. Ellipsoid Vertical Datum Listing
    - xi. Ellipsoid Model
  - e. Restrictions
    - i. Service Date
    - ii. Comments
- a. Priority
- b. Topic Listing.
- c. Date
- d. Remark
- iii. Restriction
- a. Azimuth From
- b. Azimuth To
- c. Distance Beyond
- d. Distance Within
- e. DME Bevond
- f. DME Within
- g. Altitude Above

- h. Altitude Below
- 2. The attribute 'Channel Indicator' will have 2 options: Single and Dual.
- 3. The following information will not be following the concept of temporality:
  - a. Equipment Information
  - b. Radarscope Location
  - c. Restrictions

# 4.15 TACAN

- 1. Following information, including but not limited to, will be captured for TACAN component in AIRNAV:
  - a. General Information
    - i. Name
    - ii. MagVar/Year
    - iii. Military Use Only Indicator
    - iv. VFR Only Indicator
    - v. Special Use Only Listing.
    - vi. Special Aircraft Only Listing.
  - b. Equipment Information
    - i. Equipment Type Listing.
    - ii. Doppler Indicator Listing.
    - iii. Transmitter Indicator Listing.
    - iv. Channel
    - v. Standby Power Listing.
    - vi. Program Code Listing.
  - c. Coordinates
    - i. Latitude
    - ii. Longitude
    - iii. Elevation
    - iv. Elevation Unit of Measure
    - v. Horizontal Datum Listing.
    - vi. Vertical Datum Listing
    - vii. Ellipsoid Elevation
    - viii. Ellipsoid Elevation Unit of Measure
    - ix. Ellipsoid Horizontal Datum Listing.
    - x. Ellipsoid Vertical Datum Listing
    - xi. Ellipsoid Model
  - d. Restrictions
    - i. Service Date
    - ii. Comments
      - 1. Priority
      - 2. Topic Listing.
      - 3. Date
      - 4. Remark
    - iii. Restriction
      - 1. Azimuth From
      - 2. Azimuth To
      - 3. Distance Beyond
      - 4. Distance Within
      - 5. DME Beyond
      - 6. DME Within
      - 7. Altitude Above
      - 8. Altitude Below
  - e. Alignment
    - i. Radial
    - ii. Altitude
    - iii. Date ARR Established
    - iv. Start
    - v. Stop
    - vi. T1
    - vii. T2
    - viii. Orbit

- 1. T1
- a. Direction Listing.
- b. Distance
- c. Altitude
- d. Date
- e. Ref Mean Align
- 2. T2
- a. Direction Listing.
- b. Distance
- c. Altitude
- d. Date
- e. Ref Mean Align
- f. Receiver Checkpoint
  - i. Type Mandatory information. Listing.
  - ii. Airport Id
  - Altitude Mandatory information only if the value for 'Type' is 'Air'.
     Altitude not required if the value for 'Type' is 'Ground'.
  - iv. Distance Mandatory information.
  - v. Radial Mandatory information.
  - vi. Description Mandatory information.
- 2. The attribute 'Transmitter Indicator' will have 2 options: Single and Dual.
- 3. The attribute 'Altitude' within the Receiver Checkpoint section will be mandatory information, if user selects the value for the attribute 'Type' as 'Air'.
- 4. The attribute 'Altitude' within the Receiver Checkpoint section will not be required, if user selects the value for the attribute 'Type' as 'Ground'.
- 5. System will allow the user to enter values for T2, only if the attribute 'Transmitter Indicator' is selected as 'Dual'.
- 6. The following information will not be following the concept of temporality:
  - a. Equipment Information
  - b. Receiver Checkpoint
  - c. Alignment
  - d. Restrictions

# 4.16 VOR / VOT

- Following information, including but not limited to, will be captured for VOR / VOT component in AIRNAV:
  - 1. General Information
    - a. Name
    - b. MagVar/Year
    - c. Military Use Only Indicator
    - d. VFR Only Indicator
    - e. Special Use Only Listing.
    - f. Special Aircraft Only Listing.
  - 2. Equipment Information
    - a. Equipment Type Listing.
    - b. Doppler Indicator
    - c. Voice Listing.
    - d. Transmitter Indicator Listing.
    - e. Rec Type Listing.
    - f. Standby Power Listing.
    - g. Program Listing.
    - h. Used As Listing.
  - Coordinates
    - a. Latitude
    - b. Longitude
    - c. Elevation
    - d. Elevation Unit of Measure
    - e. Horizontal Datum Listing.
    - f. Vertical Datum Listing
    - g. Ellipsoid Elevation
    - h. Ellipsoid Elevation Unit of Measure
    - i. Ellipsoid Horizontal Datum Listing.
    - i. Ellipsoid Vertical Datum Listing
    - k. Ellipsoid Model
  - 4. Restrictions
    - a. Service Date
    - b. Comments
- i. Priority
- ii. Topic Listing.
- iii. Date
- iv. Remark
- c. Restriction
- i. Azimuth From
- ii. Azimuth To
- iii. Distance Beyond
- iv. Distance Within
- v. DME Beyond
- vi. DME Within
- vii. Altitude Above
- viii. Altitude Below
- 5. Alignment
  - a. Radial
  - b. Altitude
  - c. Date ARR Established
  - d. Start
  - e. Stop
  - f. T1

- g. T2 h. Orbit
  - 1. T1
- i. Direction Listing.
- ii. Distance
- iii. Altitude
- iv. Date
- v. Ref Mean Align
- 2. T2
- i. Direction Listing.
- ii. Distance
- iii. Altitude
- iv. Date
- v. Ref Mean Align
- 6. Receiver Checkpoint
  - Type Mandatory information. Listing.
  - b. Airport Id
  - Altitude Mandatory information only if the value for 'Type' is 'Air'.
     Altitude not required if the value for 'Type' is 'Ground'.
  - d. Distance Mandatory information.
  - e. Radial Mandatory information.
  - f. Description Mandatory information.
- 2. The attribute 'Transmitter Indicator' will have 2 options: Single and Dual.
- 3. The attribute 'Used As' will have 2 options: VOR and VOT.
- 4. The attribute 'Altitude' within the Receiver Checkpoint section will be mandatory information, if user selects the value for the attribute 'Type' as 'Air'.
- 5. The attribute 'Altitude' within the Receiver Checkpoint section will not be required, if user selects the value for the attribute 'Type' as 'Ground'.
- 6. System will allow the user to enter values for T2, only if the attribute 'Transmitter Indicator' is selected as 'Dual'.
- 7. The following information will not be following the concept of temporality:
  - 1. Equipment Information
  - 2. Receiver Checkpoint
  - 3. Alignment
  - 4. Restrictions